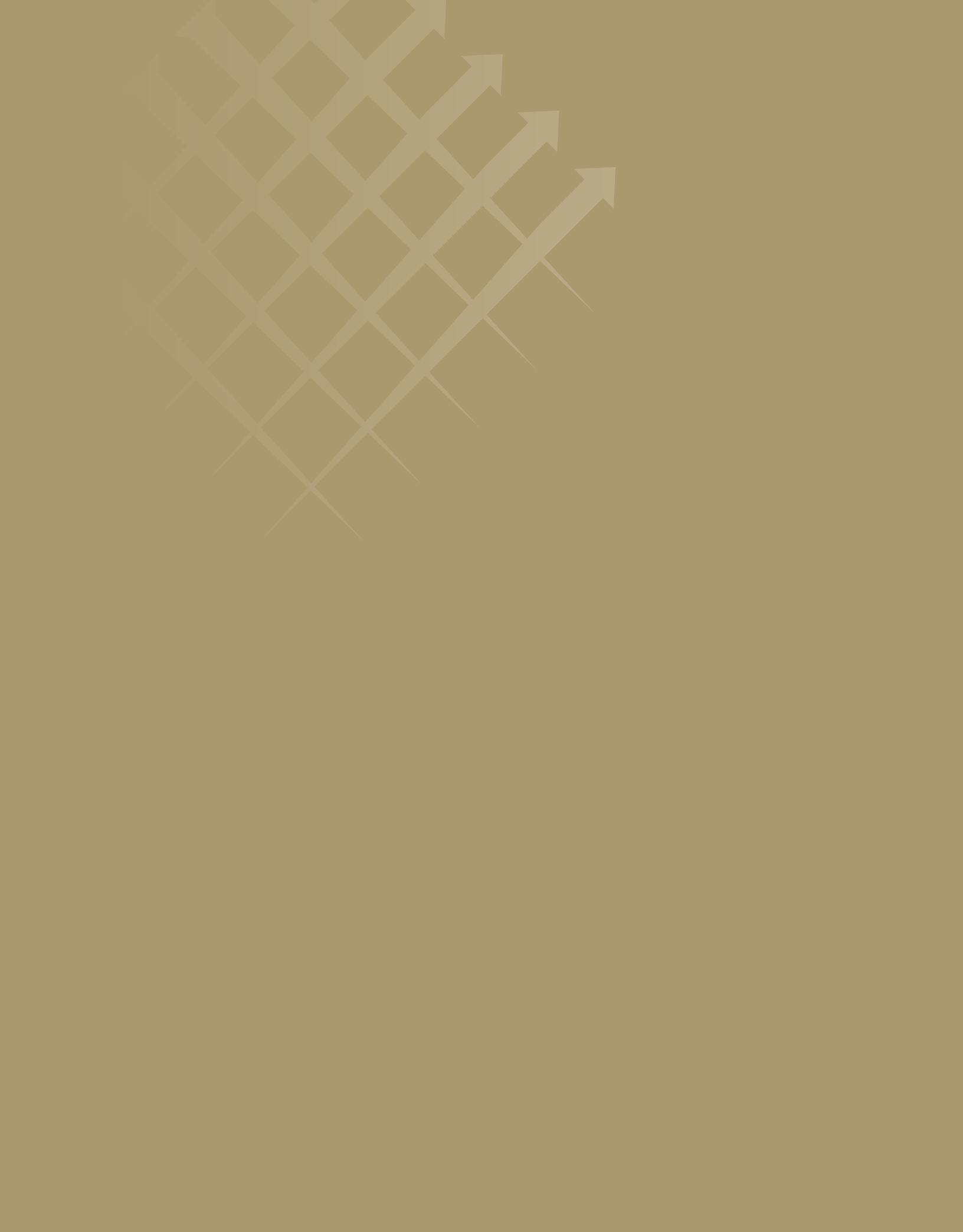


DGX Matrix Switchers ..... 514 – 526
DG Matrix Switchers ..... 533 – 537
Transmitter and Receiver Modules ..... 527 – 533, 538 – 541
Accessories ..... 542 – 543

FIBER

THE PERFECT EQUATION

Distance + Security + Quality = AMX Fiber

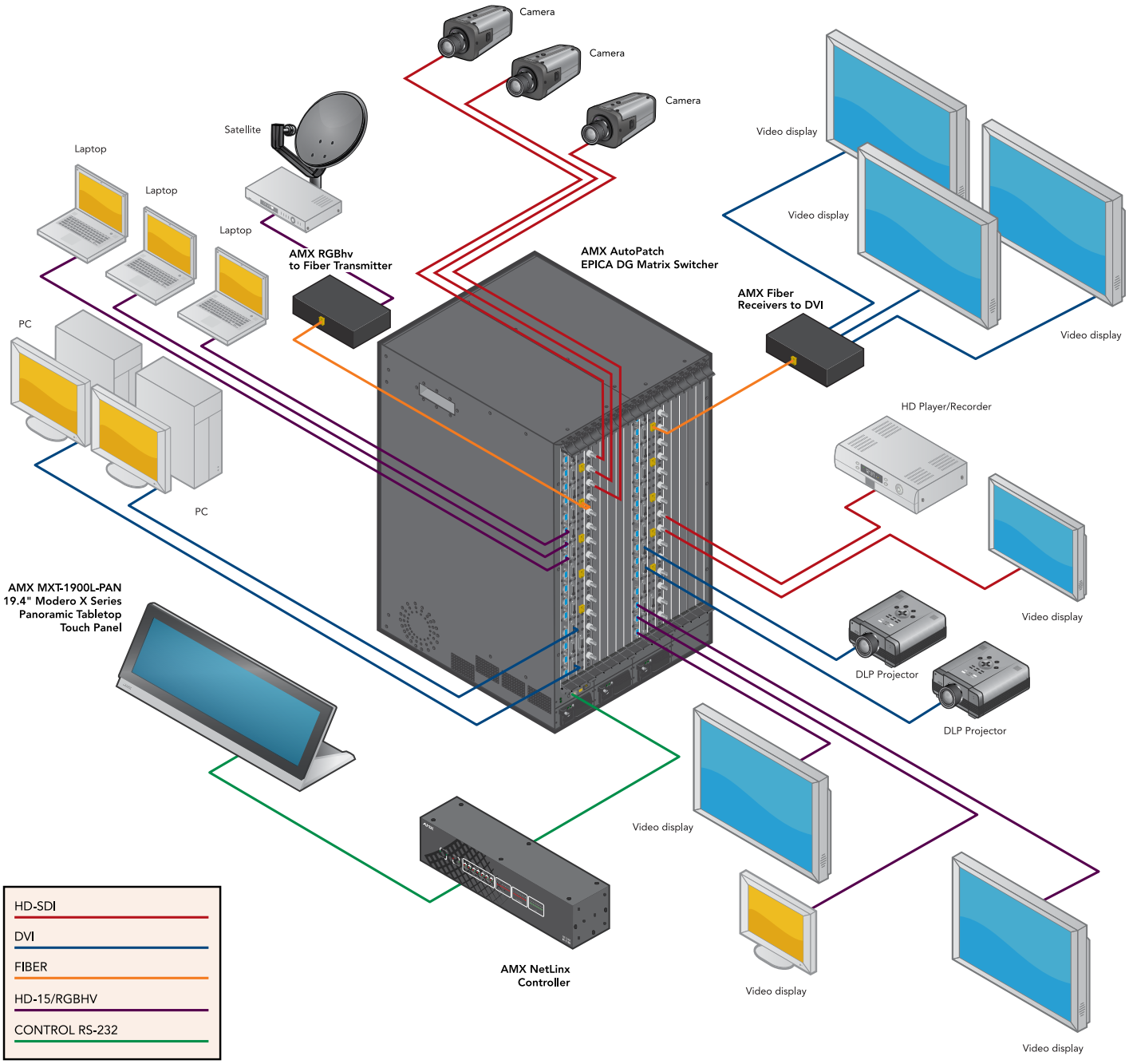
Analog / Digital conversion and fiber optic video transport in a customizable matrix switching system eliminates the struggle to incorporate high-resolution digital DVI and analog RGBHV computer video signals in the same installation while solving security issues in even the most sensitive installations at the highest government, medical and corporate levels. AMX Digital Generation products convert and route between digital and analog video with ease negating the need for external video conversion boxes and can receive, route and transmit over fiber. Maintain the investment in high quality sources by sending true, flawless, uncompressed DVI and RGBHV up to 3,000 feet without compromising quality. In addition, our Epica DG Matrix Switcher has options for SD-SDI and HD-SDI allowing even more powerful camera's and sources to be incorporated into the infrastructure with ease. From point-to-point solutions utilizing our DVI and RGBHV Fiber Transmitter and Receivers to very large 144x144 full matrix switching scenarios with the Epica DG – all our DG products are designed for flexibility, flawless performance and optimum security.

SYSTEM DIAGRAM

The Epica DG (Digital Generation) is designed to break all the rules of signal routing. Its exclusive digital platform converts between video formats allowing for any input to be routed out to any output simultaneously regardless of format. This negates the need for external video conversion boxes, simplifying system design and installation for integrators and reduces the overall cost of the system for users.

With options for RGBHV (HD-15), DVI, SD-SDI and HD-SDI it is the perfect solution for high-resolution video distribution. Optional fiber transmission modules and output boards can extend the reach of perfect video - at the highest resolutions - over 3,000 feet.

© January 2013 AMX. All rights reserved. AMX does not assume responsibility for any errors or omissions.



© January 2013 AMX. All rights reserved. AMX does not assume responsibility for any errors or omissions.

Epica DGX 16
Customizable Matrix Switcher

The Best of Fiber
Matrix Switching – Just Got Smaller!

CALL FOR CUSTOM QUOTE

OVERVIEW

When the demands of high-resolution video clarity, long distances and maximum security need to be met without compromise THINK FIBER. The Epica DGX 16 is a customizable, fiber optic matrix switcher with integrated signal conversion, and when used in conjunction with our compatible DGX Fiber Transmitters and Receivers the system also provides transport of uncompressed video, embedded audio and one-way control along with video scaling – making it the easy to specify, easy to install, easy to use solution.

Start with any combination of high-resolution video sources (3 component, RGBHV and DVI), add DGX HD-15 and DGX DVI Fiber Transmitters to send uncompressed pure video up to 3,000 feet to the Epica DGX 16 Matrix Switcher, route those signals to any output, then transmit those signals another 3,000 feet to our DGX HD-15 or DGX DVI Fiber Receiver featuring SmartScale video scaling. With the powerful combination of video conversion, scaling and high speed 4.95 Gbps digital switching the system delivers perfect video every time – regardless of signal style. Plug and GO. It's that easy. And, since fiber uses light to send data, rather than electric signals, it is perfect for electronically sensitive environments as it is not susceptible to non-intrusive physical wire tapping.

Our exclusive DGX Technology integrated into every product in the DGX family transcodes signals to a common digital platform so analog and digital live in harmony; in other words, the system offers simple analog-to-digital and digital-to-analog signal conversion whether it is needed at the source, the switch or the destination. Designed with flexibility, the compact 4RU enclosure is expandable from 4x4 to 16x16 by increments of 4 inputs and/or outputs with the choice of DGX SC Optical input and output boards, and DGX DVI input and output boards. Like all Epica DGX switchers, the DGX 16 features several integrator friendly tools designed to simplify setup and reduce installation issues including hot-swappable I/O boards, real-time system monitoring, and fully redundant, hot-swappable power supplies with redundant power feeds. When paired with the DGX Fiber Transmitters and Receivers the Epica DGX 16 can also pass embedded audio and control sent from the TX through the matrix switcher to the RX. The DGX Fiber Receivers (both HD-15 and DVI) feature SmartScale™ Technology which automatically responds to the display's declared EDID information and scales the video resolution and adjusts the video parameters to match the displays native format. SmartScale Technology ensures every display operates at its preferred resolution and eliminates the incompatibilities that can arise in matrix switching systems when the output resolution of the source is not supported by some or all of the displays in the system.

COMMON APPLICATION

The Epica DGX 16 is the ideal solution for government agencies, command-and-control environments, universities, hospitals, casinos, retail environments or any facility that demands the highest quality video be shared between rooms or even buildings.

FEATURES

- Compatible DGX Fiber Receivers feature SmartScale™ Technology which automatically responds to the display's declared EDID information and scales the video to the best resolution and video parameters for that display without manual setup
- DGX Technology offers simple analog-to-digital and digital-to-analog signal conversion whether it is needed at the source, the switch or the destination
- Designed for use with single strand multimode fiber; the most common, easily terminated and installed fiber cable solution

US SALES AND SUPPORT **800.222.0193** • INTERNATIONAL SALES AND SUPPORT **+1.469.624.7400** • **www.amx.com**

© January 2013 AMX. All rights reserved. AMX does not assume responsibility for any errors or omissions.

- Use in conjunction with our new DGX Fiber Transmitters and Receivers to send video, audio and one-way control over a single fiber cable up to 6,000 feet -- 3,000 feet to the matrix switcher and 3,000 feet after the matrix switcher
- Supports matrix switching of embedded digital or analog audio and one-way control when used in conjunction with any DGX Fiber TX / RX pair running through the Epica DGX 16 SC Fiber Input and Output Boards
- High speed 4.95 Gbps digital switching ensures perfect pixel for pixel video at resolutions up to 1920 x 1200 @ 60Hz, video uncompressed and uncompromised
- Pre-loaded with the most common EDID settings on each of the matrix switcher's input connectors to emulate the display's response when queried, which ensures transmission of the video from the source device
- Custom EDID settings can be loaded on each input with the use of the included EDID Programmer
- Provides additional power on every DVI output commonly used to power external DVI extenders
- Standard RS-232 control port
- Standard USB (mini-B) port can be used as a virtual Com port for serial communication with a PC
- Supports AutoPatch's simple BCS serial control protocol
- Standard Integrated TCP/IP APWeb control
- Includes intuitive front mounted control panel featuring LED backlit LCD and blue light buttons, allowing quick and easy access to execute many commands including status, change, disconnect, local presets, global presets, front panel lock and unlock, and more
- Ships with free AutoPatch matrix switcher configuration software
- Ships with free APControl to provide easy single-user PC control of the matrix switcher
- Native NetLinx Integrated Port provides direct connection to any NetLinx Master as well as offering a tunneling access point for our simple BCS commands
- Rack mounting ears included
- Fully redundant power supplies with independent power paths for maximum reliability
- Local presets allow quick recall of a pre-programmed set of switches with a single command; multiple presets can exist within a system at the same time
- Global presets allow quick recall of a comprehensive snapshot of all switches

DEALER BENEFITS

- **SmartScale™ Technology** - The Epica DGX Receivers automatically scale the video output to match the display's preferred resolution
- **Easily Convert Between Analog and Digital Signals** - DGX Technology offers simple signal conversion between analog and digital signals whether it is needed at the source, the switch or the destination
- **Field Serviceable and Upgradable** - Easily add or replace I/O boards at any time after deployment - the system automatically recognizes the new configuration and activates the boards

CUSTOMER BENEFITS

- **Securely Transport AV Signals** – As a fiber based product, its inherent features protect information from security threats while delivering audio and visual data as it was intended
- **Perfect Reproduction of the Source Image** – The DGX provides high speed digital switching supporting 4.95 Gbps, which ensures perfect pixel for pixel reproduction of original source image for all video resolutions up to 1920x1200
- **Cost Effective Fiber Transportation Solution** – The Epica DGX Fiber Matrix Switchers utilize single strand multimode fiber, the industry favorite for ease of use and termination

WATCH THE VIDEO
See the DGX in action by watching the video profile online at: www.amx.com/assets/videos/DGX.mp4.

TRAINING AVAILABLE
For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

SPOTLIGHT: DGX Fiber Technology
Get all the security, clarity and distance benefits of signal distribution over fiber without any of the hassle. Visit www.amx.com/DGX/ to learn more.

DGX
The exclusive digital platform delivered by our Digital Generation Technology allows multiple high-resolution signal styles including RGBHV and DVI to be converted freely internal to the matrix switcher to numerous outputs with various styles. In addition, Digital Generation fiber boards integrate the ability to receive and transmit signals directly via MTP fiber connections.

COUNTRY OF ORIGIN: UNITED STATES
To satisfy the requirements/regulations of existing or future government programs, this two-letter code is being provided to designate the country of origin for this product.

© January 2013 AMX. All rights reserved. AMX does not assume responsibility for any errors or omissions.

Epica DGX 16 Configuration Guide

Easily customize an Epica DGX 16 by selecting any combination of available input and output boards (as space allows).The Epica DGX 16 enclosure has space for 4 input boards and 4 outputs boards. Each board has 4 connections. Backplane architecture in the DGX 16 enclosure provides a physical path for all routing connections – meaning any input can be routed to any or all outputs in any combination without limitations; even if you add boards later in the field. Start as small as 4x4 and install more boards as the requirements of the installation grow. Need even more room? No problem, the Epica DGX 16 boards can also be moved into an Epica DGX 32 enclosure allowing for a total of 8 input boards and 8 output boards.

EPICA DGX 16 ENCLOSURE

FG#	MODEL	DESCRIPTION
FG1057-16	AVS-EPDGX16-ENC	Epica DGX 16 Matrix Switcher Enclosure, 4RU compatible with all Epica DGX 16/32 Matrix Switcher input and output boards for a maximum configuration of 16x16

EPICA DGX 16/32 INPUT BOARDS

FG#	MODEL	DESCRIPTION
FG1056-500	AVS-EPDGX32-OI-SC	4 SC Fiber Connection Epica DGX 16/32 Input Board receives fiber inputs from DGX DVI and DGX HD-15 Fiber Transmitters
FG1056-520	AVS-EPDGX32-VI-DVI	4 Connection DVI with DVI Epica DGX 16/32 Input Board

EPICA DGX 16/32 OUTPUT BOARDS

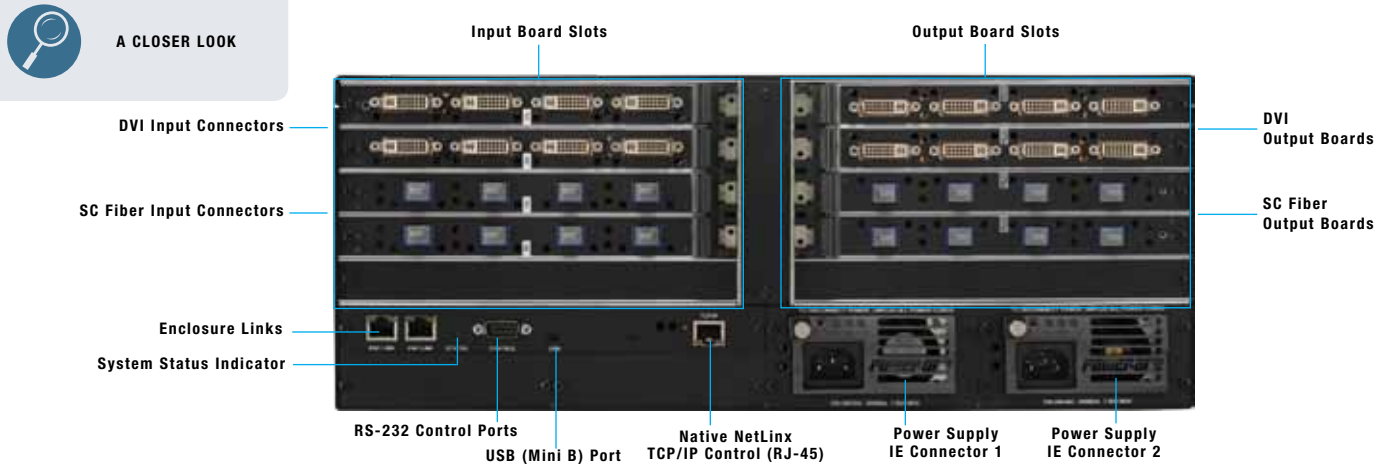
FG#	MODEL	DESCRIPTION
FG1056-510	AVS-EPDGX32-OO-SC	4 SC Fiber Connection Epica DGX 16/32 Output Board, sends fiber outputs to DGX DVI and DGX HD-15 Fiber Receivers
FG1056-530	AVS-EPDGX32-VO-DVI	4 Connection DVI with DVI Epica DGX 16/32 Output Board

DGX TRANSMITTERS AND RECEIVERS

Use SC Fiber Input and Output Boards with the DGX Fiber Transmitters and Receivers

FG#	MODEL	DESCRIPTION
FG1010-210-01	AVB-TX-DGX-DVI-SC FIBER	DGX DVI Fiber Transmitter featuring Digital Generation Technology
FG1010-410-01	AVB-RX-DGX-SC FIBER-DVI	DGX DVI Fiber Receiver with SmartScale and Digital Generation Technology
FG1010-200-01	AVB-TX-DGX-HD15-SC FIBER	DGX HD-15 Fiber Transmitter featuring Digital Generation Technology
FG1010-400-01	AVB-RX-DGX-SC FIBER-HD15	DGX HD-15 Fiber Receiver with SmartScale and Digital Generation Technology

A CLOSER LOOK



© January 2013 AMX. All rights reserved. AMX does not assume responsibility for any errors or omissions.

SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 785 Watts
- Power Consumption (Typ): 210 Watts, fully loaded enclosure
- BTU/hr (Max): 2679
- BTU/hr (Typ): 717, fully loaded enclosure
- Operational Temperature: 32° to 113° F (0° to 45° C)
- Storage Temperature: -22° to 158° F (-40° to 70° C)
- Humidity: 0 to 90% non-condensing
- MTBF: 170,000 hours
- Noise Level: <58 dBA @ 1m (Typical @ 25°C)
- Note: Specifications are subject to change

DIMENSIONS

- 6 13/16" x 19" x 15" (17.4 cm x 48.3 cm x 38 cm)
- RU: 4

DIMENSIONS WITH EXTRACTORS

- 6 13/16" x 19" x 16" (17.4 cm x 48.3 cm x 40.6 cm)
- RU: 4

WEIGHT

Appx. 34 lbs (15.4 kg) per loaded enclosure

SHIPPING WEIGHT

Appx. 40 lbs (18.1 kg) per loaded enclosure

MTBF

170,000 hours

CERTIFICATIONS

CE, FCC Class A, UL, cUL, RoHS / WEEE compliant

SC FIBER

- Compatible AutoPatch Fiber Modules: DGX DVI TX/RX, DGX HD-15 TX/RX , Epica DGX 16, Epica DGX 32, Epica DGX 144
- Signal Types over Fiber: Video, Audio, Serial Data (Video signal must be present to pass Audio and Serial Data)
- Resolution Support: 640x480 @ 60 Hz up to 1920x1200 @ 60 Hz
- Interlaced Resolution Support:
  - 1080i 60, 59.94, 50 (fields per second)
  - 576i 100, 50 (fields per second)*
  - 480i 60 (fields per second)*
- Audio Support: Analog Stereo or S/PDIF (S/PDIF up to 96 kHz Sample Rate, 96 kHz audio only available when source video resolution is 800x600 @ 60 Hz(40 MHz pixel clock) or greater, otherwise 48 kHz max)
- Serial Data Support: Unidirectional RS-232, up to 115.2k Baud
- Fiber Cable Type: Multimode Simplex (with SC termination) 50/125 µm (preferred) or 62.5/125 µm
- Fiber Cable Length:
  - Up to 3000 ft In / Out with 50um cable (3000 ft cable requires 50/125 µm OM2 class low loss fiber cable)
  - Up to 1500 ft In / Out with 62.5um
- Fiber Connector: SC Optical
- Safety Certifications: Class 1 Laser Product (Class 3R Laser Product when fiber is disconnected from the unit) IEC 60825-1, 2001 (fiber output board)
- Power Output of Laser Radiation (max): 4.08 mW (Fiber Output Board)
- Optical Budget:
  - 9.75 dBm (typ) between DGX Tx and input board
  - 9.75 dBm (typ) between Output board and DGX Rx
  - Optical Modulation Amplitude (OMA) Output: -6.25 dBm (Typ)
  - Optical Modulation Amplitude (OMA) Input Sensitivity: -16 dBm (Typ)
- Fiber Input Board Propagation Delay: 1 us
- Fiber Output Board Propagation Delay: 2 us
- Compatibility Note: Not compatible with third party optical distribution amplifiers or multi-mode to single-mode converters

* 480i and 576i are only available when being transmitted from a DGX HD-15 Tx as a YPbPr signal

DVI

- Signal Type: DVI-D Input (Single Link)
- Resolution Support: 640x480 @ 60Hz up to 1920x1200 @ 60Hz
- Interlaced Resolution Support
  - 1080i 60, 59.94, 50 (fields per second)
  - 576i 100, 50 (fields per second)
  - 480i 60 (fields per second)
- Data Rate (Max): 4.95 Gbps
- Pixel Clock (Max): 165 MHz
- DDC/EDID Support:
  - EDID provided by Epica DGX 16
  - EDID is user re-programmable
- HDCP Support: None
- Input Voltage (nominal): 1.0 Vpp Differential
- Input Equalization: Up to 50 ft
- Output Nominal Voltage: 1.0 Vpp Differential
- Output Re-clocking: Yes
- Output +5V DDC Pin: 250 mA
- Output Rise Time / Fall Time:
  - 80 ps min - 200 ps Max (20% - 80%)
  - 0.13 UI min - 0.33 UI Max (@ 1.65 Gbps, 20% - 80%)
- DVI Input Board Propagation Delay: 1 us
- DVI Output Board Propagation Delay: 2 us
- Connector: DVI-I (DVI-D Single Link is the supported signal type)

EDID

- Standard Timing Identification:
  - ID 1: 1920 x 1200 @ 60 Hz*
  - ID 2: 1920 x 1080 @ 60 Hz
  - ID 3: 1680 x 1050 @ 60 Hz
  - ID 4: 1600 x 1200 @ 60 Hz
  - ID 5: 1280 x 800 @ 60 Hz
  - ID 6: 1280 x 720 @ 60 Hz
  - ID 7: 1280 x 1024 @ 60 Hz
  - ID 8: 640 x 480 @ 120 Hz

* This is the preferred timing identified in the EDID

- Established Timing:
  - 640 x 480 @60 Hz, 72 Hz, 75 Hz
  - 800 x 600 @56 Hz, 60 Hz, 72 Hz, 75 Hz
  - 1024 x 768 @60 Hz, 70 Hz, 75 Hz, 87 Hz
  - 1280 x 1024 @75 Hz

© January 2013 AMX. All rights reserved. AMX does not assume responsibility for any errors or omissions.

Epica DGX 32 Customizable Matrix Switcher

Mid-size Single Strand Multimode Fiber Matrix Switching has Never Been Easier

CALL FOR CUSTOM QUOTE

OVERVIEW

When the demands of high-resolution video clarity, long distances and maximum security need to be met without compromise THINK FIBER. The Epica DGX 32 is a customizable, fiber optic matrix switcher with integrated signal conversion, and when used in conjunction with our compatible DGX Fiber Transmitters and Receivers the system also provides transport of uncompressed video, embedded audio and one-way control along with video scaling – making it the easy to specify, easy to install, easy to use solution.

Start with any combination of high-resolution video sources (3 component, RGBHV and DVI), add DGX HD-15 and DGX DVI Fiber Transmitters to send uncompressed pure video up to 3,000 feet to the Epica DGX 32 Matrix Switcher, route those signals to any output, then transmit those signals another 3,000 feet to our DGX HD-15 or DGX DVI Fiber Receiver featuring SmartScale video scaling. With the powerful combination of video conversion, scaling and high speed 4.95 Gbps digital switching the system delivers perfect video every time – regardless of signal style. Plug and GO. It's that easy. And, since fiber uses light to send data, rather than electric signals, it is perfect for electronically sensitive environments as it is not susceptible to non-intrusive physical wire tapping.

COMMON APPLICATION

The Epica DGX 32 is the ideal solution for government agencies, command-and-control environments, universities, hospitals, casinos, retail environments or any facility that demands the highest quality video be shared between rooms or even buildings.

FEATURES

- Compatible DGX Fiber Receivers feature SmartScale™ Technology which automatically responds to the display's declared EDID information and scales the video to the best resolution and video parameters for that display without manual setup
- DGX Technology offers simple analog-to-digital and digital-to-analog signal conversion whether it is needed at the source, the switch or the destination
- Designed for use with single strand multimode fiber; the most common, easily terminated and installed fiber cable solution
- Use in conjunction with our new DGX Fiber Transmitters and Receivers to send video, audio and one-way control over a single fiber cable up to 6,000 feet -- 3,000 feet to the matrix switcher and 3,000 feet after the matrix switcher. In fact, all DGX products re-clock the signal so that it is ready to be sent another 3,000 feet thus very large distributed video systems that incorporate more than a single DGX Matrix Switcher have the potential to send video for miles
- Supports matrix switching of embedded digital or analog audio and one-way control when used in conjunction with any DGX Fiber TX / RX pair running through the Epica DGX 32 SC Fiber Input and Output Boards
- High speed 4.95 Gbps digital switching ensures perfect pixel for pixel video at resolutions up to 1920 x 1200 @ 60Hz, uncompressed and uncompromised
- Supports analog video resolutions and DVI resolutions up to 1920 x 1200 @ 60Hz
- True uncompressed DVI digital matrix switching ensures the purity of the digital image is never compromised
- Pre-loaded with the most common EDID settings on each of the matrix switcher's input connectors to emulate the display's response when queried, which ensures transmission of the video from the source device
- Custom EDID settings can be loaded on each input with the use of the included EDID Programmer
- Provides additional power on every DVI output commonly used to power external DVI extenders
- Standard RS-232 control port
- Standard USB (mini-B) port can be used as a virtual Com port for serial communication with a PC

© January 2013 AMX. All rights reserved. AMX does not assume responsibility for any errors or omissions.

- Supports AutoPatch's simple BCS serial control protocol
- Native Netlinx Integrated Port provides direct connection to any NetLinx Master as well as offering a tunneling access point for our simple BCS commands
- Standard Integrated TCP/IP APWeb control
- Includes intuitive front mounted control panel featuring LED backlit LCD and blue light buttons, allowing quick and easy access to execute many commands including status, change, disconnect, local presets, global presets, front panel lock and unlock, and more
- Ships with free AutoPatch matrix switcher configuration software
- Ships with free APControl to provide easy single-user PC control of the matrix switcher
- Rack mounting ears included
- Fully redundant power supplies with independent power paths for maximum reliability
- Local presets allow quick recall of a pre-programmed set of switches with a single command; multiple presets can exist within a system at the same time
- Global presets allow quick recall of a comprehensive snapshot of all switches

DEALER BENEFITS

- **SmartScale™ Technology** - The Epica DGX Receivers automatically scale the video output to match the display's preferred resolution
- **Easily Convert Between Analog and Digital Signals** - DGX Technology offers simple signal conversion between analog and digital signals whether it is needed at the source, the switch or the destination
- **Field Serviceable and Upgradable** - Easily add or replace I/O boards at any time after deployment - the system automatically recognizes the new configuration and activates the boards

CUSTOMER BENEFITS

- **Securely Transport AV Signals** – As a fiber based product, its inherent features protect information from security threats while delivering audio and visual data as it was intended
- **Perfect Reproduction of the Source Image** – The DGX provides high speed digital switching supporting 4.95 Gbps, which ensures perfect pixel for pixel reproduction of original source image for all video resolutions up to 1920x1200
- **Cost Effective Fiber Transportation Solution** – The Epica DGX Fiber Matrix Switchers utilize single strand multimode fiber, the industry favorite for ease of use and termination

WATCH THE VIDEO
See the DGX in action by watching the video profile online at: www.amx.com/assets/videos/DGX.mp4.

TRAINING AVAILABLE
For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

SPOTLIGHT: DGX Fiber Technology
Get all the security, clarity and distance benefits of signal distribution over fiber without any of the hassle. Visit www.amx.com/DGX/ to learn more.

DGX
The exclusive digital platform delivered by our Digital Generation Technology allows multiple high-resolution signal styles including RGBHV and DVI to be converted freely internal to the matrix switcher to numerous outputs with various styles. In addition, Digital Generation fiber boards integrate the ability to receive and transmit signals directly via MTP fiber connections.

COUNTRY OF ORIGIN: UNITED STATES
To satisfy the requirements/regulations of existing or future government programs, this two-letter code is being provided to designate the country of origin for this product.

© January 2013 AMX. All rights reserved. AMX does not assume responsibility for any errors or omissions.

Epica DGX 32 Configuration Guide

Easily customize an Epica DGX 32 by selecting any combination of available input and output boards (as space allows).The Epica DGX 32 enclosure has space for 8 input boards and 8 outputs boards. Each board has 4 connections. Backplane architecture in the DGX 32 enclosure provides a physical path for all routing connections – meaning any input can be routed to any or all outputs in any combination without limitations; even if you add boards later in the field. Start as small as 4x4 and install more boards as the requirements of the installation grow. Need even more room? No problem, the Epica DGX 32 boards can also be moved into an Epica DGX 16 enclosure allowing for a total of 4 input boards and 4 output boards.

EPICA DGX 32 ENCLOSURE

FG#	MODEL	DESCRIPTION
FG1056-32	AVS-EPDGX32-ENC	Epica DGX 32 Matrix Switcher Enclosure, 4RU compatible with all Epica DGX 16/32 Matrix Switcher input and output boards for a maximum configuration of 32x32

EPICA DGX 16/32 INPUT BOARDS

FG#	MODEL	DESCRIPTION
FG1056-500	AVS-EPDGX32-OI-SC	4 SC Fiber Connection Epica DGX 16/32 Input Board receives fiber inputs from DGX DVI and DGX HD-15 Fiber Transmitters
FG1056-520	AVS-EPDGX32-VI-DVI	4 Connection DVI with DVI Epica DGX 16/32 Input Board

EPICA DGX 16/32 OUTPUT BOARDS

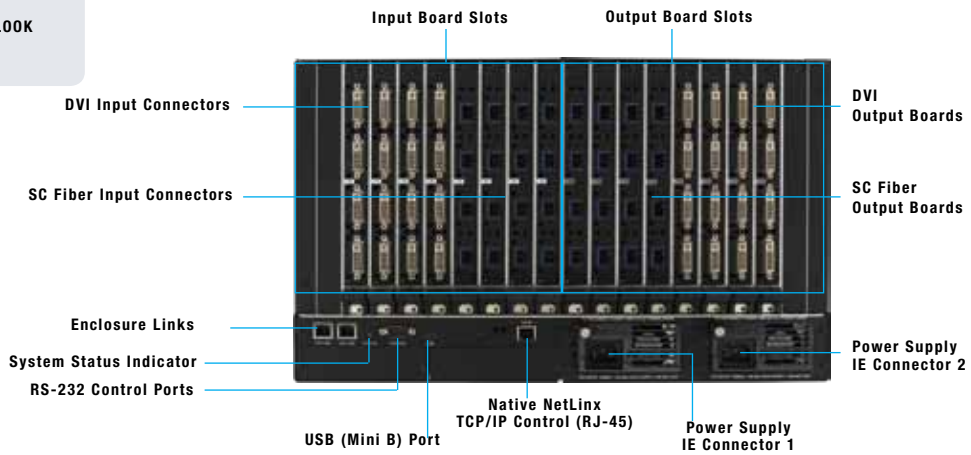
FG#	MODEL	DESCRIPTION
FG1056-510	AVS-EPDGX32-OO-SC	4 SC Fiber Connection Epica DGX 16/32 Output Board, sends fiber outputs to DGX DVI and DGX HD-15 Fiber Receivers
FG1056-530	AVS-EPDGX32-VO-DVI	4 Connection DVI with DVI Epica DGX 16/32 Output Board

DGX TRANSMITTERS AND RECEIVERS

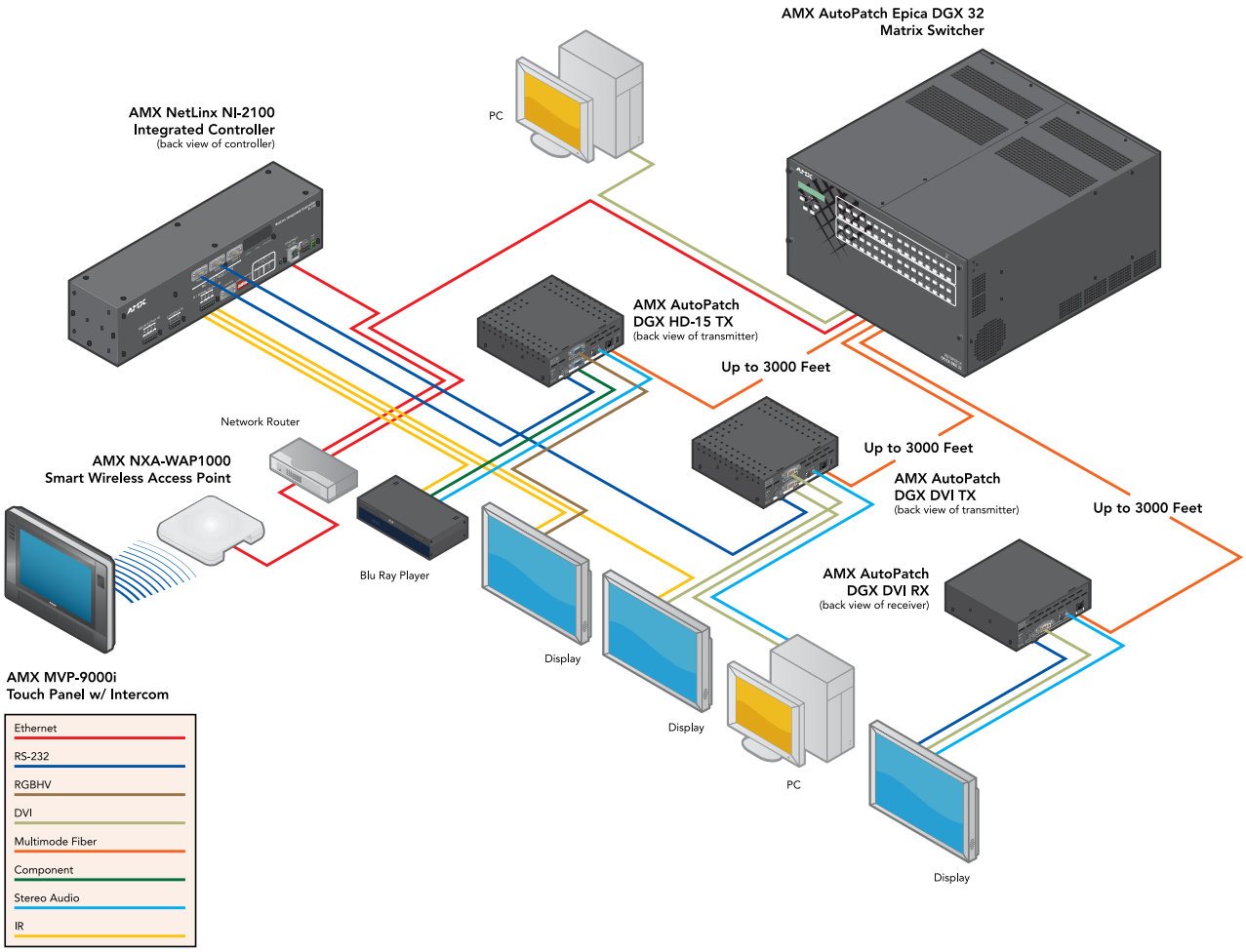
Use SC Fiber Input and Output Boards with the DGX Fiber Transmitters and Receivers

FG#	MODEL	DESCRIPTION
FG1010-210-01	AVB-TX-DGX-DVI-SC FIBER	DGX DVI Fiber Transmitter featuring Digital Generation Technology
FG1010-410-01	AVB-RX-DGX-SC FIBER-DVI	DGX DVI Fiber Receiver with SmartScale and Digital Generation Technology
FG1010-200-01	AVB-TX-DGX-HD15-SC FIBER	DGX HD-15 Fiber Transmitter featuring Digital Generation Technology
FG1010-400-01	AVB-RX-DGX-SC FIBER-HD15	DGX HD-15 Fiber Receiver with SmartScale and Digital Generation Technology

A CLOSER LOOK



© January 2013 AMX. All rights reserved. AMX does not assume responsibility for any errors or omissions.



© January 2013 AMX. All rights reserved. AMX does not assume responsibility for any errors or omissions.

SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 785 Watts
- Power Consumption (Typ): 445 Watts, fully loaded enclosure
- BTU/hr (Max): 2679
- BTU/hr (Typ): 1518, fully loaded enclosure
- Operational Temperature: 32° to 113° F (0° to 45° C)
- Storage Temperature: -22° to 158° F (-40° to 70° C)
- Humidity: 0 to 90% non-condensing
- MTBF: 102,000 hours
- Noise Level: <58 dBA @ 1m (Typical @ 25°C)
- Note: Specifications are subject to change

DIMENSIONS

- 10 7/16" x 19" x 20 1/16" (26.5 cm x 48.3 cm x 51 cm)
- RU: 6

DIMENSIONS WITH EXTRACTORS

- 10 7/16" x 19" x 21 1/16" (26.5 cm x 48.3 cm x 53.5 cm)
- RU: 6

WEIGHT

- Appx. 60 lbs (27.2 kg) per loaded enclosure
- Shipping Weight: Appx. 70 lbs (31.8 kg) per loaded enclosure

MTBF

102,000 hours

CERTIFICATIONS

CE, FCC Class A, UL, cUL, RoHS / WEEE compliant

SC FIBER

- Compatible AutoPatch Fiber Modules: DGX DVI TX/RX, DGX HD-15 TX/RX , Epica DGX 16 Epica DGX 32, Epica DGX 144
- Signal Types over Fiber: Video, Audio, Serial Data (Video signal must be present to pass Audio and Serial Data)
- Progressive Resolution Support: 640x480 @ 60 Hz up to 1920x1200 @ 60 Hz
- Interlaced Resolution Support:
  - 1080i 60, 59, 94, 50 (fields per second)
  - 576i 100, 50 (fields per second)*
  - 480i 60 (fields per second)*
- Audio Support: Analog Stereo or S/PDIF (S/PDIF up to 96 kHz Sample Rate, 96 kHz audio only available when source video resolution is 800x600 @ 60Hz(40 MHz pixel clock) or greater, otherwise 48 kHz max)
- Serial Data Support: Unidirectional RS-232, up to 115.2k Baud
- Fiber Cable Type: Multimode Simplex (with SC termination) 50/125 µm (preferred) or 62.5/125 µm
- Fiber Cable Length:
  - Up to 3000 ft In / Out with 50um cable (3000 ft cable requires 50/125 µm OM2 class low loss fiber cable)
  - Up to 1500 ft In / Out with 62.5um
- Fiber Connector: SC Optical
- Safety Certifications: Class 1 Laser Product (Class 3R Laser Product when fiber is disconnected from the unit) IEC 60825-1, 2001 (Fiber Output Board)
- Power Output of Laser Radiation (max): 4.08 mW (Fiber Output Board)
- Optical Budget
  - 9.75 dBm (typ) between DGX TX and Input board
  - 9.75 dBm (typ) between Output board and DGX RX
  - Optical Modulation Amplitude (OMA) Output: -6.25 dBm (typ)
  - Optical Modulation Amplitude (OMA) Input Sensitivity: -16.0 dBm (typ)
- Fiber Input Board Propagation Delay: 1 us
- Fiber Output Board Propagation Delay: 2 us
- HDCP Support: None
- Compatibility Note: Not compatible with third party optical distribution amplifiers or multi-mode to single-mode converters.

*480i and 576i are only available when being transmitted from a DGX HD-15 Tx as a YPbPr singal.

DVI

- Signal Type: DVI-D (Single Link)
- Resolution Support: 640x480 @ 60 Hz up to 1920x1200 @ 60 Hz
- Interlaced Resolution Support:
  - 1080i 60, 59, 94, 50 (fields per second)
  - 576i 100, 50 (fields per second)
  - 480i 60 (fields per second)
- Data Rate (max): 4.95 Gbps
- Pixel Clock (max): 165 MHz
- DDC/EDID Support:
  - EDID provided by Epica DGX 32
  - EDID is user re-programmable
- HDCP Support: None
- Input Voltage (nominal): 1.0 Vpp Differential
- Input Cable Equalization: Up to 50 ft.
- Output Nominal Voltage: 1.0 Vpp Differential
- Output Reclocking: Yes
- Output +5V DDC Pin: 250 mA
- Output Rise Time / Fall Time:
  - 80 ps min - 200 ps max (20% - 80%)
  - 0.13 UI min - 0.33 UI max (@ 1.65 Gbps, 20% - 80%)
- DVI Input Board Propagation Delay: 1 us
- DVI Output Board Propagation Delay: 2 us
- Connector: DVI-I (DVI-D Single Link is the supported signal type)

EDID

- Standard Timing Identification:
  - ID 1: 1920 x 1200 @ 60 Hz*
  - ID 2: 1920 x 1080 @ 60 Hz*
  - ID 3: 1680 x 1050 @ 60 Hz
  - ID 4: 1600 x 1200 @ 60 Hz
  - ID 5: 1280 x 800 @ 60 Hz
  - ID 6: 1280 x 720 @ 60 Hz
  - ID 7: 1280 x 1024 @ 60 Hz
  - ID 8: 640 x 480 @ 120 Hz

* Included in the detailed timing block with reduced sync blanking

- Established Timing:
  - 640 x 480 @ 60 Hz, 72 Hz, 75 Hz
  - 800 x 600 @ 56 Hz, 60 Hz, 72 Hz, 75 Hz
  - 1024 x 768 @ 60 Hz, 70 Hz, 75 Hz, 87 Hz
  - 1280 x 1024 @ 75 Hz

© January 2013 AMX. All rights reserved. AMX does not assume responsibility for any errors or omissions.

Epica DGX 144 Customizable Matrix Switcher

Large-scale Single Strand Multimode Fiber Matrix Switching has Never Been Easier

CALL FOR CUSTOM QUOTE

OVERVIEW

The Epica DGX 144 is a modular fiber optic matrix switcher designed to transport uncompressed video, embedded audio and one-way control up to 3000 feet away over single strand multimode fiber. With its exclusive DGX Technology, the system offers simple signal conversion between analog and digital signals and vice versa whether it is needed at the source, the switch or the destination. Supporting 4.95 Gbps, the DGX ensures perfect pixel for pixel reproduction for all video resolutions up to 1920x1200. Designed with flexibility, the compact 16 RU enclosure is expandable from 16x16 to 144x144 by increments of 16 and supports DGX Fiber, DVI and HD-15 input boards and DGX Fiber, and our DVI output boards. It features several integrator friendly tools designed to simplify setup and reduce installation issues including hot-swappable I/O boards, real-time system monitoring, and fully redundant, hot-swappable power supplies with redundant power feeds.

When paired with the DGX Fiber Transmitters and Receivers the system can also pass audio and control sent from the TX through the matrix switcher to the RX. The DGX Fiber Receivers (both HD-15 and DVI) feature SmartScale™ Technology which automatically responds to the display's declared EDID information and scales the video resolution and adjusts the video parameters to match the displays native format. SmartScale Technology ensures every display operates at its preferred resolution and eliminates the incompatibilities that can arise in matrix switching systems when the output resolution of the source is not supported by some or all of the displays in the system.

COMMON APPLICATIONS

The Epica DGX 144 can route and transmit pure high resolution analog and digital video up to 3,000 feet making it the perfect solution government agencies, command-and-control environments, universities, hospitals, casinos, retail environments or any facility that demands the highest quality video be shared between rooms or even buildings.

FEATURES

- Designed for use with single strand multimode fiber; the most common, easily terminated and installed fiber cable solution
- Compatible DGX Fiber Receivers feature SmartScale™ Technology which automatically responds to the display's declared EDID information and scales the video to the best resolution and video parameters for that display without manual setup
- DGX Technology offers simple signal conversion between analog and digital signals whether it is needed at the source, the switch or the destination
- Designed for use with single strand multimode fiber; the most common, easily terminated and installed fiber cable solution
- Use in conjunction with our DGX Fiber Transmitters and Receivers to send video, audio and one-way control over a single fiber cable up to 6,000 feet – 3,000 feet to the matrix switcher and 3,000 feet after the matrix switcher
- Supports matrix switching of embedded digital or analog audio and one-way control when used in conjunction with any DGX Fiber TX / RX pair running through the Epica DGX 144 SC Fiber Input and Output Boards
- Supports analog video resolutions and DVI resolutions up to 1920x1200 @ 60 Hz
- True uncompressed DVI digital matrix switching ensures the purity of the digital image is never compromised
- Pre-loaded with the most common EDID settings on each of the matrix switcher's input connectors to emulate the display's response when queried, which ensures transmission of the video from the source device
- Custom EDID settings can be loaded on each input with the use of the included EDID Programmer
- Standard RS-232 control port
- Standard USB (mini-B) port can be used as a virtual Com port for serial communication with a PC
- Supports AutoPatch's simple BCS serial control protocol
- Standard Integrated TCP/IP APWeb control

© January 2013 AMX. All rights reserved. AMX does not assume responsibility for any errors or omissions.

- Includes intuitive front mounted control panel featuring LED backlit LCD and blue light buttons, allowing quick and easy access to execute many commands including status, change, disconnect, local presets, global presets, front panel lock and unlock, and more
- Ships with free AutoPatch matrix switcher configuration software
- Ships with free APControl to provide easy single-user PC control of the matrix switcher
- Rack mounting ears included
- Free upgrade to a lifetime warranty available
- Fully redundant power supplies with independent power paths for maximum reliability
- Local presets allow quick recall of a pre-programmed set of switches with a single command; multiple presets can exist within a system at the same time
- Global presets allow quick recall of a comprehensive snapshot of all switches

TRAINING AVAILABLE
For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

SPOTLIGHT: DGX Fiber Technology
Get all the security, clarity and distance benefits of signal distribution over fiber without any of the hassle. Visit www.amx.com/DGX/ to learn more.

DGX
The exclusive digital platform delivered by our Digital Generation Technology allows multiple high-resolution signal styles including RGBHV and DVI to be converted freely internal to the matrix switcher to numerous outputs with various styles. In addition, Digital Generation fiber boards integrate the ability to receive and transmit signals directly via MTP fiber connections.

COUNTRY OF ORIGIN: UNITED STATES
To satisfy the requirements/regulations of existing or future government programs, this two-letter code is being provided to designate the country of origin for this product.

SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 1563 Watts
- Power Consumption (Typ): 850 Watts, fully loaded enclosure
- BTU/HR (Max): 5333
- BTU/HR (Typ): 2900, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Noise Level: <62 dBA @ 1m (Typical @ 25°C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS

- 28" x 19" x 20 1/16" (71.1 cm x 48.3 cm x 51 cm)
- RU: 16

DIMENSIONS (WITH EXTRACTORS)

- 28" x 19" x 21 1/8" (71 cm x 48.3 cm x 53.5 cm)
- RU: 16

WEIGHT

- Appx. 160 lbs per loaded enclosure (72.6 kg)
- Shipping Weight: Appx. 205 lbs (93 kg) per loaded enclosure

CERTIFICATIONS

CE, FCC Class A, UL, cUL, RoHS/WEEE compliant

SC FIBER

- Compatible AutoPatch Fiber Modules: DGX DVI TX/RX, DGX HD-15 TX/RX, Epica DGX 32, Epica DGX 144
- Signal Types over Fiber: Video, Audio, Serial Data (Video signal must be present to pass Audio and Serial Data)
- Resolution Support: 640x480@60 Hz up to 1920x1200 @ 60 Hz
- Interlaced Resolution Support
  - 1080i 60, 59.94, 50 (fields per second)
  - 576i 100, 50 (fields per second)*
  - 480i 60 (fields per second)*
- Audio Support: Analog Stereo or S/PDIF (S/PDIF up to 96 kHz Sample Rate, 96 kHz audio only available when source video resolution is 800x600 @ 60 Hz(40 MHz pixel clock) or greater, otherwise 48 kHz Max)
- Serial Data Support: Unidirectional RS-232, up to 115.2 k Baud
- Fiber Cable Type: Multimode Simplex (with SC termination) 50/125 µm (preferred) or 62.5/125 µm
- Fiber Cable Length:
  - Up to 3000 ft In / Out with 50 um cable (3000 ft cable requires 50/125 µm OM2 class low loss fiber cable)
  - Up to 1500 ft In / Out with 62.5 um
- Fiber Connector: SC Optical
- Safety Certifications: Class 1 Laser Product (Class 3R Laser Product when fiber is disconnected from the unit) IEC 60825-1, 2001 (Fiber Output Board)
- Power Output of Laser Radiation (Max): 4.08 mW (Fiber Output Board)
- Optical Budget
  - 9.75 dBm (typ) between DGX Tx and Input board
  - 9.75 dBm (typ) between Output board and DGX Rx
  - Optical Modulation Amplitude (OMA) Output: -6.25 dBm (typ)
  - Optical Modulation Amplitude (OMA) Input Sensitivity: -16.0 dBm (typ)
- HDCP Support: None
- Compatibility Note: Not compatible with third party optical distribution amplifiers or multi-mode to single-mode converters.

*480i and 576i are only available when being transmitted from a DGX HD-15 Tx as a YPbPr signal

© January 2013 AMX. All rights reserved. AMX does not assume responsibility for any errors or omissions.

DIGITAL VIDEO (DVI)

- Signal Type: DVI-D Input (Single Link)
- Resolution Support: 640x480 @ 60 Hz up to 1920x1200 @ 60 Hz
- Interlaced Resolution Support
  - 1080i 60, 59.94, 50 (fields per second)
  - 576i 100, 50 (fields per second)
  - 480i 60 (fields per second)
- Data Rate (Max): 4.95 Gbps
- Pixel Clock (Max): 165 MHz
- DDC/EDID Support
  - EDID provided by Epica DGX 144
  - EDID is user re-programmable
- HDCP Support: None
- Input Voltage (Nominal): 1.0 Vpp Differential
- Input Cable Equalization: Up to 50 ft
- Output Voltage (Nominal): 1.0 Vpp Differential
- Output Reclocking: Yes
- Output +5V DDC Pin: 50 mA
- Output Rise Time / Fall Time
  - 80 ps min - 200 ps max (20% - 80%)
  - 0.13 UI min - 0.33 UI max (@ 1.65 Gbps, 20% - 80%)
- DVI Input Board Propagation Delay: 2 us
- DVI Output Board Propagation Delay: 3 us
- Connector: DVI-I (DVI-D Single Link is the supported signal type)

EDID DVI

- Standard Timing Identification:
  - ID 1: 1920 x 1200 @ 60 Hz*
  - ID 2: 1920 x 1080 @ 60 Hz
  - ID 3: 1680 x 1050 @ 60 Hz
  - ID 4: 1600 x 1200 @ 60 Hz
  - ID 5: 1280 x 800 @ 60 Hz
  - ID 6: 1280 x 720 @ 60 Hz
  - ID 7: 1280 x 1024 @ 60 Hz
  - ID 8: 640 x 480 @ 120 Hz

* This is the preferred timing identified in the EDID

- Established Timing:
  - 720 x 400 @ 70 Hz, 88 Hz
  - 640 x 480 @ 60 Hz, 67 Hz, 72 Hz, 75 Hz
  - 800 x 600 @ 56 Hz, 60 Hz, 72 Hz, 75 Hz
  - 1024 x 768 @ 60 Hz, 70 Hz, 75 Hz, 87 Hz
  - 1280 x 1024 @ 75 Hz
  - 1152 x 870 @ 75 Hz

RGBHV (HD-15)

- Signal Type: RGBHV Input
- Resolution Support: 640x480 @ 60 Hz up to 1920x1200 @ 60 Hz
- Pixel Clock (Max): 165 MHz
- DDC/EDID Support
  - EDID provided by Epica DGX 144
  - EDID is user re-programmable
- RGB in Signal Level Range: 0 - 700 mVpp (0 - 750 mVpp max)
- RGB Input Impedance: 75 Ohms
- HV Sync Input Signal Range: 0 to +5 V
- HV Sync Input Impedance: 510 Ohms
- HV Sync Input Trigger Voltage: + 1.25 V
- Input Connector: HD-15

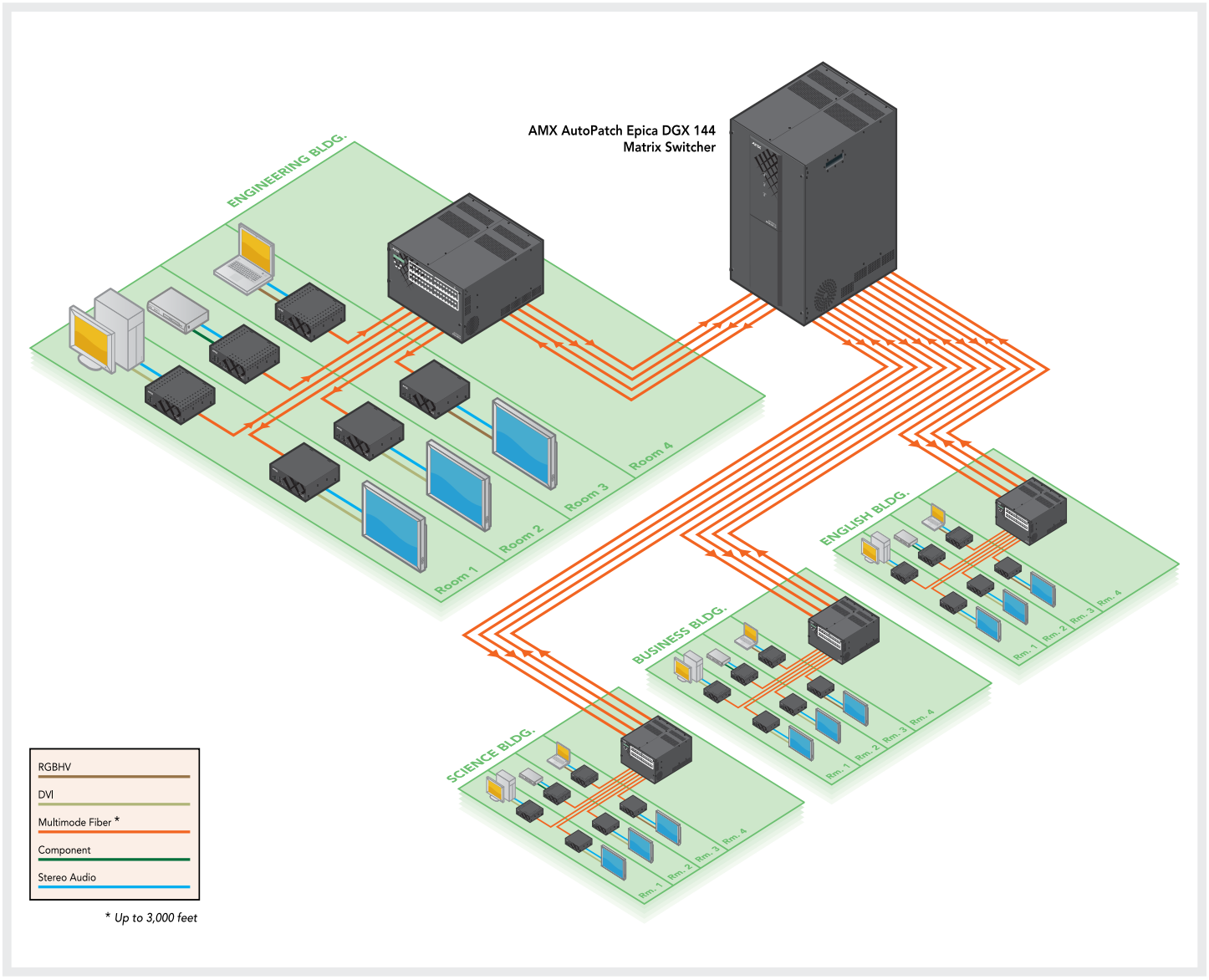
EDID RGBHV

- Standard Timing Identification:
  - ID 1: 1920 x 1200 @ 60 Hz*
  - ID 2: 1920 x 1080 @ 60 Hz
  - ID 3: 1680 x 1050 @ 60 Hz
  - ID 4: 1600 x 1200 @ 60 Hz
  - ID 5: 1280 x 800 @ 60 Hz
  - ID 6: 1280 x 720 @ 60 Hz
  - ID 7: 1280 x 1024 @ 60 Hz
  - ID 8: 640 x 480 @ 120 Hz

* This is the preferred timing identified in the EDID

- Established Timing:
  - 720 x 400 @ 70 Hz, 88 Hz
  - 640 x 480 @ 60 Hz, 67 Hz, 72 Hz, 75 Hz
  - 800 x 600 @ 56 Hz, 60 Hz, 72 Hz, 75 Hz
  - 832 x 624 @ 75 Hz
  - 1024 x 768 @ 60 Hz, 70 Hz, 75 Hz, 87 Hz
  - 1280 x 1024 @ 75 Hz
  - 1152 x 870 @ 75 Hz

© January 2013 AMX. All rights reserved. AMX does not assume responsibility for any errors or omissions.



© January 2013 AMX. All rights reserved. AMX does not assume responsibility for any errors or omissions.

DGX DVI Fiber TX/RX Modules

Single Fiber Multimode Modules

AVB-TX-DGX-DVI-SC-FIBER Transmitter, DVI to Fiber Video, Digital, Analog Stereo (FG1010-210-01)
AVB-RX-DGX-SC-FIBER-DVI Receiver, Fiber to DVI Video, Digital, Analog Stereo (FG1010-410-01)

OVERVIEW

Get all the security, clarity and distance benefits of signal distribution over fiber without any of the hassle. The new DGX line is specifically designed for use with a single strand of multimode fiber, and if you are new to fiber it's the most common, easily terminated and installed cable solution. Now you too can send true, pure, uncompressed DVI, audio and control 3,000 feet and beyond in any environment.

SmartScale™ on the Receivers ensures quick or no set-up time by automatically recognizing any device's supported resolution and signal style parameters. Now you can switch out visiting PCs and replacement LCDs without manual setup.

FEATURES

- Designed for use with a single strand of multimode fiber; the most common, easily terminated and installed fiber cable solution
- Send and receive video, audio and one-way control over a single fiber cable up to 3,000 feet
- Supports uncompressed video resolutions up to 1920 x 1200 @ 60Hz, including 1080p with a full 4.95 Gbps optical transmission data rate providing lossless pixel for pixel reproduction
- The transmitter module is pre-loaded with the most common EDID settings on the DVI input to emulate the display's response when queried, which ensures transmission of the video from the source device; in addition custom EDID settings can be loaded to the DVI input with the use of the included EDID Programmer
- The receiver module features SmartScale™ Technology automatically responds to the display's declared EDID information and scales the video to the best resolution and video parameters for that display without manual setup
- DGX Technology provides a common signal transport and matrix switching layer that transcodes between analog and digital signals; this allows the DGX DVI and HD-15 TX/RX pairs to be used interchangeably
- Compact enclosure size and compatible with all V Style versatile mounting options including rack, surface or pole
- Backed by our AMX 3 year warranty

SPOTLIGHT: DGX Fiber Technology
Get all the security, clarity and distance benefits of signal distribution over fiber without any of the hassle. Visit www.amx.com/DGX/ to learn more.

DGX
The exclusive digital platform delivered by our DGX Technology allows multiple high-resolution signal styles to be converted freely internal to the matrix switcher to numerous outputs with various styles. In addition, DGX fiber products integrate the ability to receive and/or transmit signals directly via SC fiber connections.

D-TOOLS CERTIFIED PRODUCT
This product can be found in the D-Tools manufacturer product database and specified as a third party device when building and proposing a system using D-Tools System Integrator software.

REVIT BIM
This product is part of the Autodesk Revit database and can be specified in designs for Building Information Modeling (BIM). Download the associated Revit .rfa file from the Autodesk SEEK Web site. It is also searchable under 'AMX' in any Autodesk application.

COUNTRY OF ORIGIN: UNITED STATES
To satisfy the requirements/regulations of existing or future government programs, this two-letter code is being provided to designate the country of origin for this product.

© January 2013 AMX. All rights reserved. AMX does not assume responsibility for any errors or omissions.

A CLOSER LOOK

SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz; 0.6A @ 115 VAC (Max)
- Power Consumption (Max): 12 V (±10%) , 1.25A (15W)
- Power Consumption (Typ)
  - TX: 12V, 0.4A (5W)
  - RX: 12V, 0.8A (10W)
- BTU/HR (Max): 51
- BTU/HR (Typ)
  - TX: 17
  - RX: 34
- Power Connector: 2.1 mm DC Power Jack
- Power Output of Laser Radiation DVI TX (Max): 4.08 mW
- Operational Temperature: 32° to 113° F (0° to 45° C)
- Storage Temperature: -22° to 158° F (-30° to 70° C)
- Humidity: 0 to 90% non-condensing
- MTBF: 92,000 hrs
- Compatible AutoPatch Fiber Products:
  - DGX DVI TX/RX; DGX HD-15 TX/RX
  - Epica DGX 32, Epica DGX 144
- Advanced Configuration Interface: USB Mini-B
- Fiber Cable Type:
  - Multimode Simplex (with SC termination)
  - 50/125 µm (preferred) or 62.5/125 µm
- Fiber Cable Length:
  - Up to 3000 ft with 50um cable*
  - Up to 1500 ft with 62.5um cable

*3000 ft cable requires 50/125 µm OM2 class low loss fiber cable, transmission distance will vary depending on the type/quality of fiber used, fiber bandwidth, cable bend radius/kinks, splicing quality & quantity, and chromatic or modal dispersion

- Optical Budget: 9.75 dBm (Typ) between DGX TX and RX
- Optical Modulation Amplitude (OMA): -6.25 dBm (Typ)
- Optical Modulation Amplitude (OMA) Sensitivity: -16.0 dBm (Typ)
- Fiber Connector: SC Optical
- Compatibility Note: Not compatible with third party optical distribution amplifiers or multi-mode to single-mode converters

DIMENSIONS (HWD)

- 1 5/8” x 5 13/16” x 5 1/8” (4.2 cm x 14.7 cm x 13.1 cm)
- RU: 1

WEIGHT

- Approx. 1.75 lbs per loaded enclosure (0.8 kg)
- Shipping Weight: Approx. 2.75 lb (1.25 kg)

CERTIFICATIONS

- Safety Certifications: Class 1 Laser Product (Class 3R Laser Product when fiber is disconnected from the unit) IEC 60825-1, 2001 (HD-15 Tx)
- CE, FCC Class A, UL, cUL, RoHS

© January 2013 AMX. All rights reserved. AMX does not assume responsibility for any errors or omissions.

VIDEO DVI TRANSMITTER / RECEIVER

- Progressive Resolution Support: 640x480 @ 60Hz up to 1920x1200 @ 60 Hz
- Data Rate (Max): 4.95 Gbps
- Pixel Clock: 25 MHz to 165 MHz
- Digital Processing: Video - 24 bit, 165 MHz
- Input Interlaced Resolution Support*
  - 1080i 60, 59.94, 50 (fields per second)
  - 576i 100, 50 (fields per second)

* Interlace video supported into the Transmitter, progressive only supported out of the Receiver

VIDEO DGX DVI TRANSMITTER

- Input Signal Type: DVI-D Input (Single Link)
- DDC/EDID Support: EDID provided by DGX transmitter
- EDID is user reprogrammable
- HDCP Support: None
- Input Voltage (nominal): 1.0 Vpp Differential
- Input Connector: DVI-I (DVI-D Single Link is the supported signal type)
  - DVI Local Out Nominal Voltage: 1.0 Vpp Differential
  - DVI Local Out Re-clocking (CDR): Yes
  - DVI Local Out +5V DDC Pin: 50 mA
  - DVI Local Out Rise Time / Fall Time:
    - 75 ps Min - 240 ps Max (20% - 80%)
    - 0.12 UI Min - 0.4 UI Max (@ 1.65 Gbps, 20% - 80%)
  - DVI Local Output Connector: DVI-I (DVI-D Single Link is the supported signal type)
- Propagation Delay (Typ): 2 µs

AUDIO DGX DVI TRANSMITTER

- Input Signal Type: Stereo Analog, S/PDIF (2 Channel L-PCM)
- Video signal must be present to pass Audio
- Analog Input Level (Max): +8 dBu, unbalanced
- Analog Input Impedance: 2K Ohms
- S/PDIF Resolution: 16 bit to 24 bit
- S/PDIF Sample Rate: 32 kHz, 44.1 kHz, 48 kHz, 96 kHz (96 kHz audio only available when source video resolution is 800x600 @ 60 Hz(40 MHz pixel clock) or greater. Otherwise 48 kHz max.)
- S/PDIF Input Signal Level Range: 200 mVpp to 2.5 Vpp terminated
- S/PDIF Input Impedance: 75 Ohms
- Analog to Digital Reference Level: +8 dBu = 0 dBfs
- Optimal Analog Audio Operating Range: -30 dBu to +8 dBu
- Optimal Digital Audio Operating Range: -38 dBfs to 0 dBfs
- Input Connector:
  - 3.5 mm Mini-Stereo Jack (Analog Stereo)
  - RCA Jack (S/PDIF)

SERIAL DATA DGX DVI TRANSMITTER

- Input Signal Type: Unidirectional RS-232, the control signal is transmitted in the same direction as Video/Audio.
- Signal Type: Video signal must be present to pass Serial Data
- Input Signal Level (Max): ± 15V
- Baud Rate (Max): 115.2k Baud, 25ft cable
- Baud Rate (Typ): 57.6k Baud, 150ft Cable
- Input Connector: Pluggable 3.5mm Terminal Block

EDID DGX DVI TRANSMITTER

- Standard Timing Identification:
  - ID 1: 1920 x 1200 @ 60 Hz*
  - ID 2: 1920 x 1080 @ 60 Hz*
  - ID 3: 1680 x 1050 @ 60 Hz
  - ID 4: 1600 x 1200 @ 60 Hz
  - ID 5: 1280 x 800 @ 60 Hz
  - ID 6: 1280 x 720 @ 60 Hz
  - ID 7: 1280 x 1024 @ 60 Hz
  - ID 8: 640 x 480 @ 120 Hz

* This is the preferred timing identified in the EDID

- Established Timing:
  - 640 x 480 @ 60 Hz, 72 Hz, 75 Hz
  - 800 x 600 @ 56 Hz, 60 Hz, 72 Hz, 75 Hz
  - 1024 x 768 @ 60 Hz, 70 Hz, 75 Hz, 87 Hz
  - 1280 x 1024 @ 75 Hz

RECOMMENDED ACCESSORIES	DESCRIPTION	PART #	PAGE #
Epica DGX 32 DVI	Mid-Size Fiber-Based Matrix Switching up to 32x32	(AVS-EPDGX32)	518
Epica DGX 144	Large-Scale Single Strand Multimode Fiber Matrix Switching up to 144x144	(AVS-EPDGX144)	523
AVB-VSTYLE-SURFACE-MNT	V Style Module Surface Mount	(FG1010-722)	542
AVB-VSTYLE-RMK-1U	V Style Module Tray	(FG1010-720)	542
AVB-VSTYLE-RMK-FILL-1U	V Style Module Tray w/ fill plates	(FG1010-721)	542
AVB-VSTYLE-POLE-MNT	V Style Module Pole Mount	(FG1010-723)	543

© January 2013 AMX. All rights reserved. AMX does not assume responsibility for any errors or omissions.

DGX HD-15 Fiber TX/RX Modules

Single Fiber Multimode Modules

AVB-TX-DGX-HD15-SC FIBER	Transmitter, HD-15 to Fiber Video, Digital, Analog Stereo	(FG1010-200-01)
AVB-RX-DGX-SC FIBER-HD15	Receiver, Fiber to HD-15 Video, Digital, Analog Stereo	(FG1010-400-01)

OVERVIEW

Get all the security, clarity and distance benefits of signal distribution over fiber without any of the hassle. The new DGX line is specifically designed for use with a single strand of multimode fiber, and if you are new to fiber it's the most common, easily terminated and installed cable solution. Now you too can send true, pure, uncompressed DVI, audio and control 3,000 feet and beyond in any environment.

Auto-detect on the Transmitters and SmartScale™ on the Receivers ensure quick or no set-up time by automatically recognizing any device's supported resolution and signal style parameters. Now you can switch out visiting PCs and replacement LCDs without manual setup.

FEATURES

- Designed for use with a single strand of multimode fiber; the most common, easily terminated and installed fiber cable solution
- Send and receive video, audio and one-way control over a single fiber cable up to 3,000 feet
- Supports RGBHV, RGBS, RGsB, and Y/Pb/Pr video resolutions up to 1920 x 1200 @ 60Hz, including 1080p with a full 4.95 Gbps optical transmission data rate providing lossless pixel for pixel reproduction
- Pre-loaded with the most common EDID settings on the HD-15 input to emulate the display's response when queried, which ensures transmission of the video from the source device
- Custom EDID settings can be loaded to the HD-15 input with the use of the included EDID Programmer
- DGX Technology provides a common signal transport and matrix switching layer that transcodes between analog and digital signals; allowing the DGX DVI and HD-15 TX/RX pairs to be used interchangeably
- Auto detection on the HD-15 input; so manual setup is not required for visiting PC's or any supported analog video source
- Standard USB (mini-B) port can be used as a virtual Com port for serial communication with a PC during system setup and upgrades
- Compact module size is compatible with all V Style versatile mounting options including rack, surface or pole
- Backed by our AMX 3 year warranty

SPOTLIGHT: DGX Fiber Technology
Get all the security, clarity and distance benefits of signal distribution over fiber without any of the hassle. Visit www.amx.com/DGX/ to learn more.

DGX
The exclusive digital platform delivered by our DGX Technology allows multiple high-resolution signal styles to be converted freely internal to the matrix switcher to numerous outputs with various styles. In addition, DGX fiber products integrate the ability to receive and/or transmit signals directly via SC fiber connections.

D-TOOLS CERTIFIED PRODUCT
This product can be found in the D-Tools manufacturer product database and specified as a third party device when building and proposing a system using D-Tools System Integrator software.

REVIT BIM
This product is part of the Autodesk Revit database and can be specified in designs for Building Information Modeling (BIM). Download the associated Revit .rfa file from the Autodesk SEEK Web site. It is also searchable under 'AMX' in any Autodesk application.

COUNTRY OF ORIGIN: UNITED STATES
To satisfy the requirements/regulations of existing or future government programs, this two-letter code is being provided to designate the country of origin for this product.

US SALES AND SUPPORT **800.222.0193** • INTERNATIONAL SALES AND SUPPORT **+1.469.624.7400** • **www.amx.com**

© January 2013 AMX. All rights reserved. AMX does not assume responsibility for any errors or omissions.

A CLOSER LOOK

SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz; 0.6A @ 115 VAC (Max)
- Power Consumption (Max): 12 V (±10%), 1.25A (15W)
- Power Consumption (Typ)
  - TX: 12V, 0.5A (6W)
  - RX: 12V, 1A (12W)
- BTU/HR (Max): 51
- BTU/HR (Typ)
  - TX: 21
  - RX: 41
- Power Connector: 2.1 mm DC Power Jack
- Operational Temperature: 32° to 113° F (0° to 45° C)
- Storage Temperature: -22° to 158° F (-30° to 70° C)
- Humidity: 0 to 90% non-condensing
- MTBF: 92,000 hrs
- Compatible AutoPatch Fiber Products:
  - DGX DVI TX/RX; DGX HD-15 TX/RX
  - Epica DGX 32, Epica DGX 144
- Advanced Configuration Interface: USB Mini-B
- Fiber Cable Type:
  - Multimode Simplex (with SC termination)
  - 50/125 µm (preferred) or 62.5/125 µm
- Fiber Cable Length:
  - Up to 3000 ft with 50um cable*
  - Up to 1500 ft with 62.5um cable

*3000 ft cable requires 50/125 µm OM2 class low loss fiber cable, transmission distance will vary depending on the type/quality of fiber used, fiber bandwidth, cable bend radius/kinks, splicing quality & quantity, and chromatic or modal dispersion

- Optical Budget: 9.75 dBm (Typ) between DGX TX and RX
- Optical Modulation Amplitude (OMA): -6.25 dBm (Typ)
- Optical Modulation Amplitude (OMA) Sensitivity: -16.0 dBm (Typ)
- Fiber Connector: SC Optical
- Compatibility Note: Not compatible with third party optical distribution amplifiers or multi-mode to single-mode converters.

DIMENSIONS (HWD)

- 1 5/8" x 5 13/16" x 5 1/8" (4.2 cm x 14.7 cm x 13.1 cm)
- RU: 1

WEIGHT

- Approx. 1.7 lbs per loaded enclosure (0.8 kg)
- Shipping Weight: Approx. 2.7 lb (1.3 kg)

CERTIFICATIONS

- Safety Certifications (HD-15 TX): Class 1 Laser Product (Class 3R Laser Product when fiber is disconnected from the unit) IEC 60825-1, 2001
- CE, UL, cUL, RoHS

© January 2013 AMX. All rights reserved. AMX does not assume responsibility for any errors or omissions.

VIDEO DGX HD-15 TRANSMITTER / RECEIVER

- Progressive Resolution Support: 640x480 @ 60Hz up to 1920x1200 @ 60 Hz
- Data Rate (Max): 4.95 Gbps
- Pixel Clock: 25 MHz to 165 MHz
- Digital Processing: Video - 24 bit, 165 MHz
- Input Interlaced Resolution Support*
  - 1080i 60, 59.94, 50 (fields per second)
  - 576i 100, 50 (fields per second)
  - 480i 60 (fields per second)

*Interlace video supported into the Transmitter, progressive only supported out of the Receiver

VIDEO DGX HD-15 TRANSMITTER

- Input Signal Type: RGBHV, RGBS, RGsB, Y/Pb/Pr
- Auto-Adjust Input: Yes
- DDC/EDID Support:
  - EDID provided by DGX transmitter
  - EDID is user reprogrammable
- RGB Input Signal Level Range: 0 - 700 mVpp (0 - 750 mVpp Max)
- RGB Input Impedance: 75 Ohms
- HV Sync Input Signal Level Range: 0 to + 5 V
- HV Sync Input Impedance: 510 Ohms
- HV Sync Input Trigger Voltage: + 1.75 V
- Y/Pb/Pr Input Signal Level Range:
  - 1.0 Vpp for Y
  - 700 mVpp for Pb Pr
- Y/Pb/Pr Input Impedance: 75 Ohms
- Input Connector: HD-15 (RGBHV and Y/Pb/Pr)
- RGB Local Out Signal Level Range: 0 - 700 mVpp (0 - 750 mVpp max)
- RGB Local Out Impedance: 75 Ohms
- HV Sync Local Out Signal Level Range: 0 to + 5 V
- HV Sync Local Out Impedance: 50 Ohms
- Y/Pb/Pr Local Out Signal Level Range:
  - 1.0 Vpp for Y
  - 700 mVpp for Pb Pr
- Y/Pb/Pr Local Out Impedance: 75 Ohms
- Local Output Connector: HD-15 (RGBHV and Y/Pb/Pr)
- Propagation Delay (typ): 2 µs

AUDIO DGX HD-15 TRANSMITTER

- Input Signal Type: Stereo Analog, S/PDIF (2 Channel L-PCM)
- Video signal must be present to pass Audio
- Analog Input Level (max): +8 dBu, unbalanced
- Analog Input Impedance: 2 kOhms
- S/PDIF Resolution: 16 bit to 24 bit
- S/PDIF Sample Rate:32 kHz, 44.1 kHz, 48 kHz, 96 kHz (96 kHz audio only available when source video resolution is 800x600 @ 60 Hz(40 MHz pixel clock) or greater. Otherwise 48 kHz max.)
- S/PDIF Input Signal Level Range: 200 mVpp to 2.5 Vpp terminated
- S/PDIF Input Impedance: 75 Ohms
- Analog to Digital Reference Level: +8 dBu = 0 dBfs
- Optimal Analog Audio Operating Range: -30 dBu to +8 dBu
- Optimal Digital Audio Operating Range: -38 dBfs to 0 dBfs
- Input Connector:
  - 3.5 mm Mini-Stereo Jack (Analog Stereo)
  - RCA Jack (S/PDIF)

SERIAL DATA DGX HD-15 TRANSMITTER

- Input Signal Type: Unidirectional RS-232, the control signal is transmitted in the same direction as Video/Audio.
- Video signal must be present to pass Serial Data
- Input Signal Level (Max): ± 15V
- Baud Rate (Max): 115.2k Baud, 25ft cable
- Baud Rate (Typ): 57.6k Baud, 150ft Cable
- Input Connector: Pluggable 3.5mm Terminal Block

EDID DGX HD-15 TRANSMITTER

- Standard Timing Identification:
  - ID 1: 1920 x 1200 @ 60 Hz*
  - ID 2: 1920 x 1080 @ 60 Hz*
  - ID 3: 1680 x 1050 @ 60 Hz
  - ID 4: 1600 x 1200 @ 60 Hz
  - ID 5: 1280 x 800 @ 60 Hz
  - ID 6: 1280 x 720 @ 60 Hz
  - ID 7: 1280 x 1024 @ 60 Hz
  - ID 8: 640 x 480 @ 120 Hz

* This is the preferred timing identified in the EDID

- Established Timing:
  - 640 x 480 @ 60 Hz, 72 Hz, 75 Hz
  - 800 x 600 @ 56 Hz, 60 Hz, 72 Hz, 75 Hz
  - 1024 x 768 @ 60 Hz, 70 Hz, 75 Hz, 87 Hz
  - 1280 x 1024 @ 75 Hz

RECOMMENDED ACCESSORIES	DESCRIPTION	PART #	PAGE #
Epica DGX 32 DVI	Mid-Size Fiber-Based Matrix Switching up to 32x32	(AVS-EPDGX32)	518
Epica DGX 144	Large-Scale Single Strand Multimode Fiber Matrix Switching up to 144x144	(AVS-EPDGX144)	523
AVB-VSTYLE-SURFACE-MNT	V Style Module Surface Mount	(FG1010-722)	542
AVB-VSTYLE-RMK-1U	V Style Module Tray	(FG1010-720)	542
AVB-VSTYLE-RMK-FILL-1U	V Style Module Tray w/ fill plates	(FG1010-721)	542
AVB-VSTYLE-POLE-MNT	V Style Module Pole Mount	(FG1010-723)	543

© January 2013 AMX. All rights reserved. AMX does not assume responsibility for any errors or omissions.

Epica DG

Custom Modular Matrix Switcher with Integrated Fiber Transmission RGBHV, DVI, SD-SDI, HD-SDI

CALL FOR CUSTOM QUOTE

OVERVIEW

The Epica DG (Digital Generation) is designed to break all the rules of signal routing. Its exclusive digital platform converts between video formats allowing for any input to be routed out to any output simultaneously regardless of format. This negates the need for external video conversion boxes, simplifying system design and installation for integrators and reduces the overall cost of the system for users.

With options for RGBHV (HD-15), DVI, SD-SDI and HD-SDI it is the perfect solution for high-resolution video distribution. Optional fiber transmission modules and output boards can extend the reach of perfect video – at the highest resolutions – over 3,000 feet.

So whether the installation requires large scale, high-performance signal routing, or requires large growth capability the Epica DG is the ideal solution. Contact our trained sales staff today for a custom quote. Select between RGBHV (HD-15) input and output boards, DVI input and output boards, HD-SDI input and output boards and MTP Fiber input and output boards. There are 16 connections per board, and each enclosure holds 9 input boards and 9 output boards for a Maximum matrix of 144x144.

Equipped with advanced diagnostics, the Epica DG ensures verification of power on each board, signal on each input and output, temperature detection for multiple points in the enclosure, and detection of overall power draw.

The Epica DG comes standard with RS-232 control port, supports AutoPatch's simple BCS serial control protocol and ships with free APControl software.

COMMON APPLICATION

The Epica DG is ideal for any system that includes large scale high-resolution video distribution, RGBHV / DVI / HD-SDI signal conversion, and the added security and distance of fiber transmission including digital signage, stadiums and arenas, large retail environments and mission critical secure government facilities.

FEATURES

- Lifetime Warranty
- Combines signal conversion with fiber optic routing and transmission
- Advanced system self-diagnostics
- Standard redundant (hot-swappable) power supply
- Groupings
- RS-232 control port
- Simple AutoPatch BSC Serial Control Protocol
- Ships with free APControl software
- APWeb compatible (TCP/IP control)

HELPFUL HINT - Cable Management
The EpicaDG is equipped with cable management bars designed to provide a robust tie-down for complete cable management.

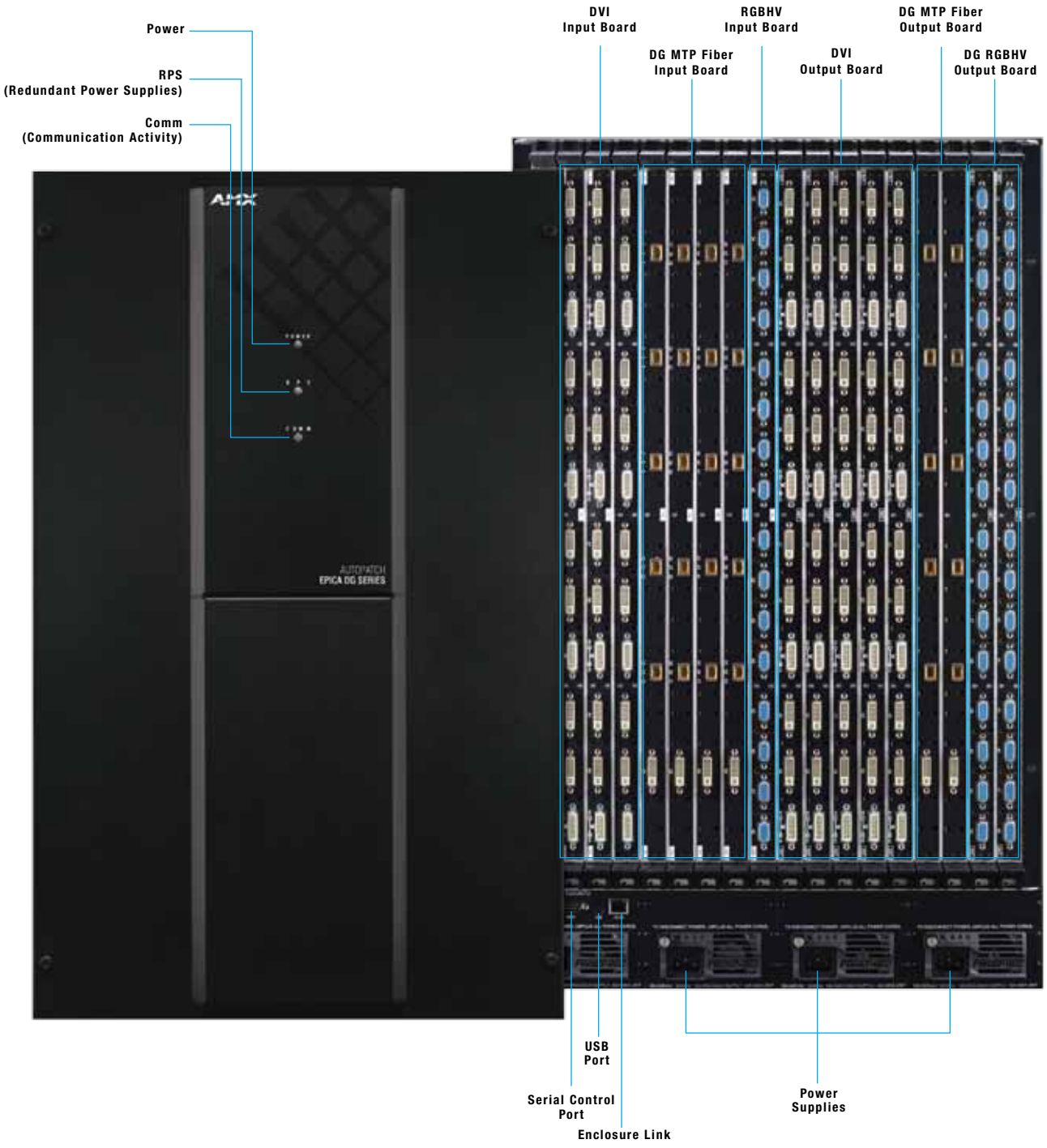
TRAINING AVAILABLE
For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

DG
The exclusive digital platform delivered by our Digital Generation Technology allows multiple high-resolution signal styles including RGBHV, DVI, SD-SDI and HD-SDI to be converted freely internal to the matrix switcher to numerous outputs with various styles. In addition, Digital Generation fiber boards integrate the ability to receive and transmit signals directly via MTP fiber connections.

REVIT BIM
This product is part of the Autodesk Revit database and can be specified in designs for Building Information Modeling (BIM). Download the associated Revit .rfa file from the Autodesk SEEK Web site. It is also searchable under 'AMX' in any Autodesk application.

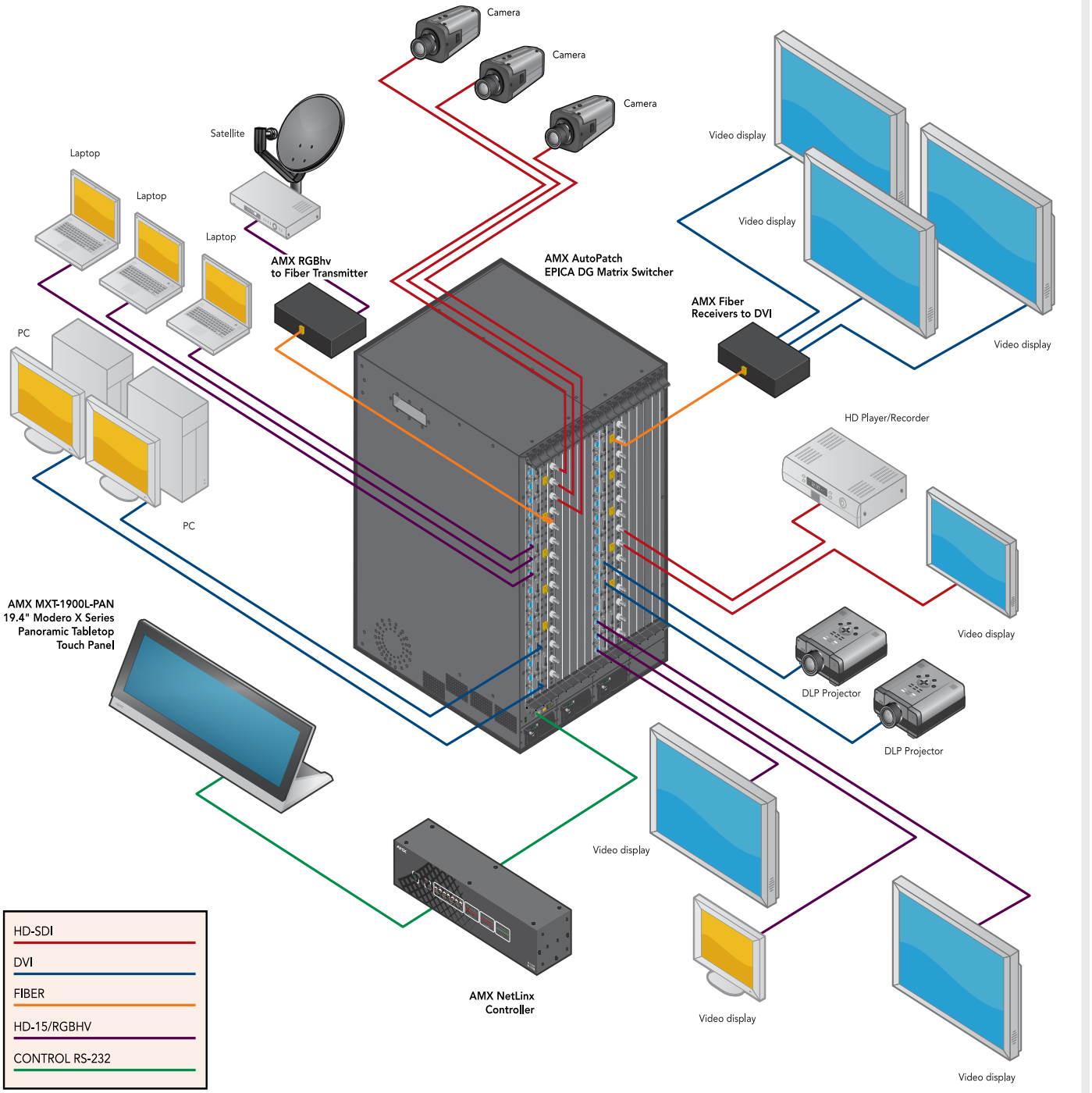
© January 2013 AMX. All rights reserved. AMX does not assume responsibility for any errors or omissions.

A CLOSER LOOK



(Not shown in photo: Communication Status Indicator and System Status Indicator are located to the left of the Serial Port.)

© January 2013 AMX. All rights reserved. AMX does not assume responsibility for any errors or omissions.



© January 2013 AMX. All rights reserved. AMX does not assume responsibility for any errors or omissions.

SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 2000 Watts
- Power Consumption (Typ): 850 Watts, fully loaded enclosure
- BTU/HR (Max): 6824
- BTU/HR (Typ): 2900, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS

- 28" x 19" x 20 1/16" (71.1 cm x 48.3 cm x 51 cm)
- RU: 16

DIMENSIONS (HWD) WITH MOUNTING EARS

- 28" x 19" x 21 1/16" (71.1 cm x 48.3 cm x 53.5 cm)
- RU: 16

WEIGHT

Appx. 160 lbs per loaded enclosure (72.6 kg)

CERTIFICATIONS

CE, FCC Class A, UL, cUL, RoHS/WEEE compliant

DIGITAL VIDEO (DVI)

- Signal Type: DVI-D Input (Single Link)
- Resolution Support: 640x480 @ 60 Hz up to 1920x1200 @ 60 Hz
- Interlaced Resolution Support
  - 1080i 60, 59.94, 50 (fields per second)
  - 576i 100, 50 (fields per second)
  - 480i 60 (fields per second)
- Data Rate (Max): 4.95 Gbps
- Pixel Clock (Max): 165 MHz
- DDC/EDID Support:
  - EDID provided by Epica DG 144
  - EDID is user re-programmable
- HDCP Support: None
- Input Voltage (Nominal): 1.0 Vpp Differential
- Input Cable Equalization: Up to 50 ft
- Output Voltage (Nominal): 1.0 Vpp Differential
- Output Reclocking: Yes
- Output +5 V DDC Pin: 50 mA
- Output Rise Time / Fall Time:
  - 80 ps min - 200 ps max (20% - 80%)
  - 0.13 UI min - 0.33 UI max (@ 1.65 Gbps, 20% - 80%)
- DVI Input Board Propagation Delay: 2 us
- DVI Output Board Propagation Delay: 3 us
- Connector: DVI-I (DVI-D Single Link is the supported signal type)

EDID DVI

- Standard Timing Identification:
  - ID 1: 1920x1200 @ 60 Hz*)
  - ID 2: 1920x1080 @ 60 Hz
  - ID 3: 1680x1050 @ 60 Hz
  - ID 4: 1600x1200 @ 60 Hz
  - ID 5: 1280x800 @ 60 Hz
  - ID 6: 1280x720 @ 60 Hz
  - ID 7: 1280x1024 @ 60 Hz
  - ID 8: 640x480 @ 120 Hz

* This is the preferred timing identified in the EDID

- Established Timing:
  - 720 x 400 @ 70 Hz, 88 Hz
  - 640 x 480 @ 60 Hz, 67 Hz, 72 Hz, 75 Hz
  - 800 x 600 @ 56 Hz, 60 Hz, 72 Hz, 75 Hz
  - 1024 x 768 @ 60 Hz, 70 Hz, 75 Hz, 87 Hz
  - 1280 x 1024 @ 75 Hz
  - 1152 x 870 @ 75 Hz

RGBHV (HD-15)

- Resolution Support: 640x480 @ 60 Hz up to 1920x1200 @ 60 Hz
- DDC/EDID Support
  - EDID Resolutions provided by the Epica DG
  - EDID is user re-programmable
  - 1920x1200*, 1920x1080, 1680x1050, 1600x1200, 1280x1024, 1280x768, 1280x720, 1152x864, 1024x768, 800x600, 640x480
- RGB in Signal Level Range: 0-750 mVpp
- RGB Input Impedance: 75 Ohms
- RGB Input Coupling: AC
- RGB Out Signal Level Range: 0-750 mVpp
- RGB Output Impedance: 75 Ohms
- RGB Output Coupling: DC
- Sync Input Signal Range: 0-5 V
- Sync Input Impedance: 510 Ohms
- Sync Output Signal Range: 0-5 V
- Sync Output Impedance: 50 Ohms
- RGBHV Connector: HD-15

* This is the preferred timing identified in the EDID

© January 2013 AMX. All rights reserved. AMX does not assume responsibility for any errors or omissions.

MTP FIBER

- Compatible AutoPatch Fiber Modules:
  - RGBHV - MTP Fiber
  - DVI - MTP Fiber
  - Other AMX AutoPatch MTP Fiber products
- Resolution Support: 640x480 @ 60 Hz up to 1920x1200 @ 60 Hz
- Fiber Cable: 12 Fiber Multimode MTP 50/125 µm or 62.5/125 µm
- Fiber Cable Length:
  - Up to 3000 ft. in**
  - Up to 3000 ft. out**
- Fiber Cable Termination: Female MTP
- Fiber Connector (On AutoPatch I/O Board): Male MTP (guide pins define it as male)

**3000 ft. cable requires low loss, controlled skew fiber cable. For cable recommendations contact AMX

DIGITAL VIDEO (SD-SDI & HD-SDI)

- Standard: SMPTE 259M-C (SD-SDI), SMPTE 292M (HD-SDI)
- Bit Rates: 270 Mbps, 1.485 Gbps
- Data Type :8 bit or 10 bit
- Input Level (Max): 0.8 Vpp, ±10%
- Input Impedance: 75 Ohms
- Output Level (Max): 0.8 Vpp, ±10%
- Output Impedance: 75 Ohms
- Jitter: <0.2 UI
- Rise and Fall Time: <750 ps, ±100 ps (20%-80%)
- Rise and fall overshoot:<10%
- Auto Cable Equalization:
  - Up to 400m of Belden 1694A or equivalent @ 270 Mbps
  - Up to 280m of Belden 8281 or equivalent @ 270 Mbps
  - Up to 200m of Belden 1694A or equivalent @ 1.485 Gbps
  - Up to 100m of Belden 8281 or equivalent @ 1.485 Gbps
- Auto Data Rate Lock: Yes
- CDR (Reclocking): Yes
- Connectors: BNC
- Resolutions Supported SMPTE 259M-C:
  - 480i (525) @ 59.94 Hz, 576i (625) @ 50 Hz
- Resolutions Supported SMPTE 292M:
  - 720p @ 60 Hz, 59.94 Hz, 50 Hz, 30 Hz, 29.97 Hz, 25 Hz, 24 Hz, 23.98 Hz
  - 1080i @ 60 Hz, 59.94 Hz, 50 Hz
  - 1080p @ 30 Hz, 29.97 Hz, 25 Hz, 24 Hz, 23.98 Hz
  - 1080PsF @ 24 Hz, 23.98 Hz

Note 1: The passing of ancillary data, including audio, is not supported.

Note 2: SMPTE 259M-C or 292M compliant timing must be provided by the source video equipment when performing signal format conversion from DVI or RGBHV to SDI.

Note 3: When utilizing signal format conversion to SDI in an Epica DG System, DVI is the preferred source signal type.

RECOMMENDED ACCESSORIES	DESCRIPTION	PART #	PAGE #
DG-RGBHV FIBER TX	DG RGBHV Fiber Transmitter	(FG1010-30-01)	538
DG-RGBHV FIBER RX	DG RGBHV Fiber Receiver	(FG1010-33-01)	538
DG-DVI FIBER TX	DG DVI Fiber Transmitter	(FG1010-60-01)	527
DG-DVI FIBER RX	DG DVI Fiber Receiver	(FG1010-63-01)	527

© January 2013 AMX. All rights reserved. AMX does not assume responsibility for any errors or omissions.

RGBHV Fiber TX/RX Modules

DG MTP Fiber Modules

AVB-TX-HD15-FIBER	Transmitter, HD-15 to Fiber Module	(FG1010-30-01)
AVB-RX-FIBER-HD15	Receiver, Fiber to HD-15 Module	(FG1010-33-01)

OVERVIEW

Designed for secure transmission of up to three unique high-resolution video RGBHV signals up to 3,000 feet. Digital Generation Fiber Transmitter / Receiver Modules can be used as an end-to-end solution or as an integrated part of an AutoPatch signal distribution system. For example: 3 RGBHV signals can be transmitted 3,000 feet before integration into the main routing system and re-distribution throughout a facility.

FEATURES

- New space saving V Style (versatile) module design
- Designed for secure transmission of high-resolution video up to 3,000 feet
- Transmits up to three unique RGBHV signals over a single high-density 12-fiber multimode cable, at resolutions up to 1920x1200
- Programmed with eight preset standard resolutions, and includes USB interface and program wizard to allow for custom settings
- Digital bit rate up to 2.7 Gbps per channel capacity (for a total bit rate of up to 32 Gbps)
- Power Supply Energy Star® rated to ensure maximum efficiency and savings
- Automatically adjusting universal 110 / 220 IEC power supply is included with every unit
- Compatible with V Style mounting options including rack, surface or pole

D-TOOLS CERTIFIED PRODUCT
This product can be found in the D-Tools manufacturer product database and specified as a third party device when building and proposing a system using D-Tools System Integrator software.

COUNTRY OF ORIGIN: UNITED STATES
To satisfy the requirements/regulations of existing or future government programs, this two-letter code is being provided to designate the country of origin for this product.

A CLOSER LOOK

© January 2013 AMX. All rights reserved. AMX does not assume responsibility for any errors or omissions.

SPECIFICATIONS

GENERAL

- Power Consumption (Max): +12 VDC to +24 VDC @ 13 A
- Power Consumption (Typ): +12 VDC to +24 VDC, 13 W
- Power Connector: 2.1 mm DC power jack (DG RGBHV MTP® fiber modules use power supplies that are provided with the unit.)
- BTU/HR (Max): 44
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Humidity: 0 to 90% non-condensing
- Compatible Fiber Equipment: DG DVI MTP Fiber Modules; other AMX AutoPatch MTP Fiber products

DIMENSIONS

1.66" x 5.80" x 5.15" (4.22 cm x 14.73 cm x 13.08 cm)

WEIGHT

Appx. 1.5 lbs (0.7 kg)

CERTIFICATIONS

CE, UL

RGBHV-MTP FIBER

- Resolution Support:
  - Up to 1600x1200 @ 60Hz refresh rate without reduced blanking
  - Up to 1920x1200 @ 60Hz refresh rate with reduced blanking
- DDC/EDID Support:
  - EDID Resolutions Provided by the RGBHV Transmitter Module
  - 1920x1200, 1920x1080 @ 60 Hz reduced sync blanking only
  - 1680x1050, 1600x1200 @ 60 Hz
  - 1280x1024 @ 60 Hz to 75 Hz
  - 1280x768, 1280x720, 1152x864, 1024x768, 800x600 @ 60 Hz to 85 Hz
  - 640x480 @ 60 Hz to 85 Hz (it may work best to select 800x600 from supplied files)
- RGB Input/Output Level: 0 to 700 mVpp (output adjustable with wizard)
- RGB Input/Output Impedance: 75 Ohms
- Propagation Delay: 475 ns using 6 ft. (1.8 m) fiber cable
- Fiber Cable Types: 12 Fiber Multimode MTP, 50/125 µm or 62.5/125 µm with female MTP/MPO connectors (male on module)
- Fiber Cable Length: Up to 3000 ft. (914 m) in and out. 3000 ft. (914 m) runs require low loss, controlled skew fiber cable. For cable recommendations, contact AMX.
- Fiber Cable Termination: Female MTP
- Fiber Connector on module: Male MTP (guide pins define it as male)
- RGBHV Connector: HD-15

RECOMMENDED ACCESSORIES

DESCRIPTION	PART #	PAGE #
AVB-VSTYLE-SURFACE-MNT	V Style Module Surface Mount	(FG1010-722)	542
AVB-VSTYLE-RMK-1U	V Style Module Tray	(FG1010-720)	542
AVB-VSTYLE-RMK-FILL-1U	V Style Module Tray w/ fill plates	(FG1010-721)	542
AVB-VSTYLE-POLE-MNT	V Style Module Pole Mount	(FG1010-723)	543

© January 2013 AMX. All rights reserved. AMX does not assume responsibility for any errors or omissions.

DVI Fiber TX/RX Modules

DG MTP Fiber Modules

AVB-TX-DVI-FIBER	Transmitter, DVI to Fiber Module	(FG1010-60-01)
AVB-RX-FIBER-DVI	Receiver, Fiber to DVI Module	(FG1010-63-01)

OVERVIEW

The Digital Generation DVI to Fiber Transmitters and Receivers transmit three unique uncompressed DVI signals up to 3,000 feet over a 12 fiber multimode MTP cable, without signal degradation or manipulation, to either an Epica DG MTP Fiber Board or directly to the receiver. Compatible with all AutoPatch Digital Generation products.

FEATURES

- New space saving V Style (versatile) module design
- Power Supply Energy Star® rated to ensure maximum efficiency and savings
- Automatically adjusting universal 110 / 220 IEC power supply is included with every unit
- Compatible with V Style mounting options including rack, surface or pole

D-TOOLS CERTIFIED PRODUCT
This product can be found in the D-Tools manufacturer product database and specified as a third party device when building and proposing a system using D-Tools System Integrator software.

COUNTRY OF ORIGIN: UNITED STATES
To satisfy the requirements/regulations of existing or future government programs, this two-letter code is being provided to designate the country of origin for this product.

A CLOSER LOOK

US SALES AND SUPPORT **800.222.0193** • INTERNATIONAL SALES AND SUPPORT **+1.469.624.7400** • **www.amx.com**

© January 2013 AMX. All rights reserved. AMX does not assume responsibility for any errors or omissions.

SPECIFICATIONS

GENERAL

- Power Consumption (Max): +12 VDC to +24 VDC @ 1.3 A, 31 W
- Power Consumption (Typ): +12 VDC to +24 VDC, 14 W
- Power Connector: 2.1 mm DC Power Jack (DG DVI MTP® Fiber Modules use power supplies that are provided with each unit.)
- BTU/HR (Max): 48
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Humidity: 0 to 90% non-condensing
- Compatible AMX AutoPatchFiber Equipment: RGBHV - MTP Fiber Modules; other AMX AutoPatch MTP Fiber products

DIMENSIONS

1.66" x 5.80" x 5.15" (4.22 cm x 14.73 cm x 13.08 cm)

WEIGHT

Appx. 1.5 lbs (0.7 kg)

CERTIFICATIONS

CE, UL

DVI-MTP FIBER

- Resolution Support: Up to 1920x1200 @ 60Hz refresh rate with reduced blanking
- DDC/EDID Support:
  - EDID provided by TX Module
  - 1920x1200, 1920x1080 @ 60 Hz reduced sync blanking only
  - 1680x1050, 1600x1200 @ 60 Hz
  - 1280x1024 @ 60 Hz to 75 Hz
  - 1280x768, 1280x720, 1152x864, 1024x768, 800x600, 640x480 @ 60 Hz to 85 Hz
- Pixel Bandwidth (Bit Rate): 1.65 Gbps
- Specification Compliant: DVI 1.0, DVI-D (Single Link DVI)
- HDCP Support: None
- Input Cable Equalization: Up to 50 ft. (15.24 m)
- Output Reclocking: Yes
- Fiber Cable Types:
  - 12 Fiber Multimode MTP
  - 50/125 µm or 62.5/125 µm
- Fiber Cable Length: Up to 3000 ft. (914.4 m) cable requires low loss, controlled skew fiber cable, such as, Alcoa 50/125 µm Laser-Link 550
- Fiber Cable Termination: Female MTP
- Fiber Connector on Module: Male MTP (guide pins define it as male)
- DVI Connector: DVI-I (DVI-D is the supported signal type)

RECOMMENDED ACCESSORIES

DESCRIPTION	PART #	PAGE #
AVB-VSTYLE-SURFACE-MNT	V Style Module Surface Mount	(FG1010-722)	542
AVB-VSTYLE-RMK-1U	V Style Module Tray	(FG1010-720)	542
AVB-VSTYLE-RMK-FILL-1U	V Style Module Tray w/ fill plates	(FG1010-721)	542
AVB-VSTYLE-POLE-MNT	V Style Module Pole Mount	(FG1010-723)	543

© January 2013 AMX. All rights reserved. AMX does not assume responsibility for any errors or omissions.

AVB-VSTYLE-SURFACE-MNT

V Style Single Module Surface Mount Brackets

(FG1010-722)

OVERVIEW

The V Style Single Module Surface Mount Brackets provide secure mounting to flat surfaces. L bracket shape attaches to pre-existing holes on module. Take advantage of the flexible architecture of stand-alone modules with a secure and professional installation.

FEATURES

- Designed for use with V Style Transmitter / Receiver, Converter and DA modules
- Mount a single module to the wall, under a desk etc.
- Bracket screws securely into place on each side of a module
- Durable powder coat finished metal

D-TOOLS CERTIFIED PRODUCT
This product can be found in the D-Tools manufacturer product database and specified as a third party device when building and proposing a system using D-Tools System Integrator software.

COUNTRY OF ORIGIN: UNITED STATES
To satisfy the requirements/regulations of existing or future government programs, this two-letter code is being provided to designate the country of origin for this product.

AVB-VSTYLE-RMK

V Style Module Rack Mounting Tray

AVB-VSTYLE-RMK-1U	No Fill Plates	(FG1010-720)
AVB-VSTYLE-RMK-FILL-1U	With Fill Plates	(FG1010-721)

OVERVIEW

The V Style Module Rack Mounting Tray allows various combinations of stand-alone modules to be installed in a 1 RU space. Take advantage of the flexible architecture of stand-alone modules with a secure and professional rack mounted installation. Fill plates are available for instances when the entire tray is not full.

FEATURES

- Designed for use with V Style Transmitter / Receiver, Converter and DA modules
- Rack mount 1/3 RW and 1/4 RW modules side by side in a single rack unit
- Modules screw securely into place at all four corners (include screws)
- Durable powder coat finished metal
- Available with and without blank filler plates

SPECIFICATIONS

DIMENSIONS (HWD)

- 1 3/4" x 19" x 5 1/4" (4.44 cm x 48 cm x 13.3 cm)
- RU: 1

© January 2013 AMX. All rights reserved. AMX does not assume responsibility for any errors or omissions.

AVB-VSTYLE-POLE-MNT

V Style Single Module Pole Mounting Kit

(FG1010-723)

OVERVIEW

The V Style Single Module Pole Mounting Kit provides secure mounting to projector pipe or similar types of installations. The U bolt attaches to mounting brackets secured to the side of a module. Take advantage of the flexible architecture of stand-alone modules with a secure and professional installation.

FEATURES

- Designed for use with V Style Transmitter / Receiver, Converter and DA modules
- Mount a single module to projector pipe or similar types of installationt
- Kit contains all hardware for the assembly

D-TOOLS CERTIFIED PRODUCT
This product can be found in the D-Tools manufacturer product database and specified as a third party device when building and proposing a system using D-Tools System Integrator software.

COUNTRY OF ORIGIN: UNITED STATES
To satisfy the requirements/regulations of existing or future government programs, this two-letter code is being provided to designate the country of origin for this product.

© January 2013 AMX. All rights reserved. AMX does not assume responsibility for any errors or omissions.